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WORK FOR THE MONTH.

Before we commence our *memoranda* of work, we would respectfully remind our readers that the MARYLAND STATE AGRICULTURAL FAIR, WILL BE HELD IN BALTIMORE, ON THE 10TH, 11TH AND 12TH DAYS OF THIS MONTH, and that the prospects are, that the attendance at the exhibition will be as large as the arrangements are liberal. No pains nor means have been spared by the Society, in fitting up the grounds, which are eligibly located, to render the accommodations ample and complete, and we feel authorized in anticipating one of the most brilliant displays of the season. We, therefore, call upon the FARMERS and PLANTERS *of our own, and neighboring States*, to see that each of their States be represented as well by her sons, as by the products of her soil, by the productions of their mechanical and household skill, and by their flocks, herds and poultry—but above all else, by their lovely *wives* and *daughters*, as, without they shall be present, to grace the exhibition with their presence and their smiles, however well every other department may be filled, that one will be wanting, which never yet has failed to throw around a meeting its brightest charm and most cherished interest.

Having alluded to the approaching Agricultural exhibition, we will now endeavor to note a few of the many things claiming your immediate attention

ON THE FARM.

Wheat.—We fondly indulge the hope that all have seeded their wheat; but if there should be any who have not, to such we would say that they should push ahead with all possible speed and get it in; and as it is important that the plants should be well rooted before the ground shall have become frozen, we would advise a dressing of guano or some other active nutrimental manure, in order that this desirable end be secured. We are aware that opinion is against the direct application of nutritive manures to the wheat crop, but as we have experienced its benefits when applied in *justly graduated quantities*, we are willing to hazard the responsibility of the recommendation, feeling well assured if *lime* and *potash* be present in the soil that no bad consequences can result therefrom. Wheat, like every thing else that has life requires to be *fed*, and when fed in the spirit of moderation and temperance cannot fail to be benefitted—it is the *excess* and *not* the diet which does the harm.

We would impress the necessity upon the wheat-grower of having his *water-furrows* skilfully made, so that the water from rains and melting snows may not be permitted to lie upon any portion of the field. For particulars as to manures and culture we refer to our remarks of last month, and would here seize the occasion to say, that if injury from the *worm* be feared, an application of 2 bushels of salt, per acre, would prove highly judicious, and that wheat should not be put into any ground but such as may have been thoroughly prepared by good deep ploughing, harrowing, and rolling, *fine tilth* being essential to the successful growth of the crop.

Rye.—It may be that circumstances may have combined to prevent some farmers from seeding their *rye*, though we hope not, as it should have been sown in August; if, however, there should be any so situated, we would remark that they may safely put it in.

Threshing out Grain.—We are the advocate of early threshing out all grain that farmers intend for sale, as it enables them to take advantage of the market and to dispose of it as circumstances may occur to justify their disposal of their surplus. We are fully satisfied that the wheat crop of our country, estimating it for the whole range of the wheat-growing States, has been a short one, *much below* what may be termed an *average* crop, but as the prospects of abundant crops in England and Europe generally are good, the chief market for wheat may chiefly be the home one, we incline to the belief, that the farmer's interest will be in being at all times prepared to avail himself of a rise in the market. If we are to give credence to the numerous accounts received from the *corn* growing regions, of the anticipated shortness of that crop—and we see no reason why we should not—we should incline to the opinion, that wheat should derive an appreciation in value through the deficiency in the usual quantity of corn grown. We are the more ready to countenance this, inasmuch as we are firm in the belief, that *corn* has taken such a hold in the markets of England and Ireland as to

increase the demand for it in those quarters, for we believe that besides its consumption there as breadstuffs, which will increase as its virtues become better known, a very large and increasing quantity will be used every year for the purposes of fattening stock.

Hogs.—Prepare pens for your hogs, so that as soon as they can no longer find good living in the woods, you may place them in pens. But before you put them therein haul into your pens marsh mud, woods mould and leaves, weeds of every description, so that while feeding them they may be converting the materials furnished them into manure. In your pumpkins and fallen fruit you will have the wherewithal to sustain them until it shall be time to corn-feed them, and we desire, while you shall be thus preparing them to be fattened, that they shall be contributing towards your resources for manuring your next year's crops.

Materials for Manure.—Now is the time to be collecting materials to compost into manure, and let no one say to himself that he has none, for the marshes, the heads and shores of creeks and rivers, the ditches, fence sides, fence corners, and headlands of the fields, the leaves and mould of your woods, the pine shatters and weeds which so abound, offer to all the fruitful sources of manure, and he who does not avail himself of them will most assuredly fail in his duty to himself and family.

Pumpkins.—See that your pumpkins are gathered before being injured by the frost, and that they are put away in a dry airy place where they will remain good until fed out to your milch cows and hogs. In feeding them to the latter, their fattening properties will be greatly improved by cooking.

Cattle Yards.—Have these covered a foot deep with earth of some kind, give to your yards a dish-like form to prevent the escape of the liquid deposits of your cattle, and you may take our word for it, that all the earth you may put in through the fall and winter will be made into manure equally as valuable as guano. To prevent the loss by evaporation of the volatile part of the manure plaster should be sown over your yards every few weeks.

Time of penning hogs for fattening.—It should be borne in mind that hogs take on fat much more rapidly in moderate than in *cold* weather, and, therefore, a saving in grain may be effected by putting them up so soon as the mast of the woods shall have been consumed.

Roots of all kinds should be dug and put away before they become touched with the frost.

Fruit Trees.—Scrub these with a brush if the bark is rough, and give them a washing with ley, and then give them a painting with soft soap, sulphur and salt.

Setting out Orchards.—As an *orchard* is intended to last for a lifetime or longer, the utmost care should be observed in the selection of the kinds of fruit to be planted therein. It costs no more to raise a good apple than a bad one, while the former will find a readier market and better price than the latter. But we desire it also to be understood that good fruit cannot be expected to grow upon poor lands. We recommend that all sites intended for orchards should be congenial to the fruit to be grown thereon, and that great care should be observed in the manuring and preparation of the soil. As to the manure, we think a compost formed of equal parts of stable or barn yard manure and marsh mud, in which say 10 bushels of ashes and 5 bushels of bone-dust were mixed with every 20 double horse-cart-loads of the two first named articles would prove as good manure as could be applied—of such compost at least 20 loads should be put broadcast upon each acre, ploughed in and the ground subsoiled and harrowed and rolled—in setting out the trees we would give to each at least a half bushel of the compost, mixed with the surface soil—this would furnish food for the young trees on their first starting next spring. If the orchard ground had not been previously limed, it should be treated to 50 or 100 bushels, per acre, as soon after the trees were planted as may be convenient. In the course of the next spring and the early part of the summer two or three workings at intervals of a few weeks, would promote the growth of the trees, or a crop of corn or potatoes may be grown between them.

Draining.—All *wet* grounds should be drained. *Wet*, stiff, tenacious clays, when deprived of their *excess of water* are often by the process of draining alone transformed into healthful loams—manures which when put on lands surcharged with water are comparatively inert; but relieve such lands of the water, and the soil yields to the influence of even the slightest applications of manure—the quantity grown on grounds theretofore wet, after being drained is increased, while the quality is greatly improved. We say to all who have *wet* tilling lands, drain them, and their future yields will pay compound interest on the expense.

Cow Sheds.—Have you sheds enough on your farm to accommodate your *Cattle, young as well as old?* If not, put them up—keep the old and young in separate yards; and, as the pastures are now scant, feed your stock of a night—salt them and make them glad to come home to lodge of an evening.

Milch Cows.—If you desire that these should give a good flow of milk, and enable you to make butter for the market, you must give them regularly twice a day messes of roots or rich slops, as cows cannot secrete much milk when grazed upon naked pastures, unless their owner makes up the deficiency in good succulent food—milk, cream, and butter are not to be made out of *nothing!*

Young Stock.—As the pastures and woods cease to afford sufficient food to keep the young stock of all kinds in a growing condition, care must be taken to have them brought into their yards and fed—the great art in raising good stock is always to keep them in tolerable flesh.

Working Animals.—Let your *working horses, mules and oxen* be well cared for, duty as well as interest require that they should be—the merciful man is always kind to his beasts of burden—as the "servant is worthy of his hire," so is the beast that toils through all seasons entitled to be treated with humanity and kindness—to be provided with good nourishing food, and plenty of it—to have comfortable lodgings where neither wet nor cold can injuriously affect them—his stall should be supplied with a plentiful bed of straw, in order, when his nightly meal is finished, that he may lie down in comfort, refresh his weary limbs, and renew his strength for the coming toils of the succeeding day. His hide too should be curried and brushed morning and night, so that the pores of his skin may be opened and no impediment offered to its healthful action.

Buckwheat.—This grain should be cut before the frost despoils it of its leaves. See that you have it cut in time, and be sure to save the *straw* for your

milch cows, as it is good food for them and worth being preserved for their use.

Sheep.—Have your sheep salted at least thrice a week; indeed, it would be to your advantage if salt was always kept in a trough, under cover, in their pasture, to resort to whenever they pleased. If there should be no pines in their pasture for them to browse upon, they should be supplied with a mixture of tar and salt, which should be repeated as often as the tar becomes hardened. If there should be no running water in their pasture, your sheep should be daily supplied with water. When your fields no longer afford sufficient pasturage, have your sheep brought into a yard to be provided with shedding for them to retire to and feed under, and see that each one gets 3 lbs. of hay per day, or such other food as affords an equal quantity of nutriment to that quantity of hay, and see that they have water and salt.

Corn-stalks.—If short of long provender for your cattle, have your corn-stalks *cut* and *stacked* as soon after your corn is gathered as possible. Have these stalks cut into inch or half inch lengths, and steam them, and a bushel will be a good feed for a cow or an ox without hay. We have seen them prepared in a very simple way—a neighbor of ours had an oblong tight box made, which had a top to it; he filled this box with cut stalks, poured over them a pot of boiling water, shut down the lid, put a weight upon it, and thus cooked them with the steam. By the time the water became milk warm the stalks were sufficiently cooked to be fed to the cattle. In the portion allotted for his milch cows he had bran or mill feed mixed, and in this way he managed to keep his stock always in thriving condition, with very little use of hay or fodder.

Selling Corn.—SELL NO CORN IN THE EAR; have all that you sell *shelled*—a hand shelling machine will answer if your crop is a small one—if large, get one to be worked by horse power—neither will cost a great deal—and we are very certain, that the *cobs*, if crushed, steamed, and fed to your cattle, will be worth more to you in a single winter than the price of a corn sheller, whether you get a small or a large one. We believe there is one-third as much nutriment in a bushel of cobs as there is in a bushel of the grain, and we do know, that cows or oxen fed upon three pecks of the crushed and steamed cobs, in addition to their usual quantity of hay, tops, or fodder, WILL KEEP FAT. *Then why haul your corn cobs to market to be given away?* It costs you as much to carry a bushel of cobs to market as it does a bushel of corn. *Shell* your corn, leave your *cobs* at home, to nourish your cattle, and through them your land, and where you now send *one* bushel of *corn*, you will be able to transport *two* for the same money. Look this subject fairly in the face—consult economy—consult the comfort of your cattle—consult the wants of your soil, and you cannot fail to take our advice.

Fall and Winter Ploughing.—If you have a field of stiff intractable clay land that you design to put in culture next spring, seize every occasion, through the fall and winter, when the ground is in a right condition to break up, and plough it—lay the furrow slices, so that the greatest extent of earth may be exposed to the frost. Be sure, however, not to plough when the soil is *wet*, but just at that period when it is moderately moist.

Fences.—Examine your fences thoroughly, and have every panel repaired, so that no temptation may be left for your own or your neighbors' stock to break in and destroy your crops. One-half of the neighborhood feuds arise from the trespasses of stock, and as good neighborhood and kind feelings should always subsist among agriculturists, we say unto all—examine and repair your fences.

Out-buildings.—If you have not recently done so, have all your out-houses thoroughly cleansed and white-washed, and while your white-washer has brush in hand let him give to your garden, yard, and lane fences a handsome coat of white-wash.

Liming of Lands.—If you have a *poor* field needing lime, make arrangements to put on 25 bushels per acre next spring—if your field is in moderate heart put on 50 bushels—but if it be well filled with vegetable matter, you may put on 100 bushels to the acre. If you cannot afford to lime the whole field, lime the half, or the fourth of it. Begin the good work and you will be so convinced of the utility of the application that you will strain a point to continue it until every acre of your arable land shall have been treated to a full dose. If it is not convenient for you to obtain lime, but can procure *marl*, put that on; for to be candid, we think it best, so far as present action is concerned. And so far as oyster shell lime may be concerned, we believe 100 lbs. of oyster shell lime is much better than an equal quantity of stone-lime, though we differ from some of our friends on this subject.

With the preceding remarks our advice for the month must close; but we cannot permit the occasion to pass without tendering to the readers of the *Farmer* the homage of our respectful regards, and to hope that health and happiness may abound among all that abide within their homes.

For the American Farmer.

GUANO—ITS ADAPTATION TO THE CROP—ITS VIRTUES IN THE IMPROVEMENT OF THE SOIL.

The value of guano is well known to a considerable number of farmers in several of the states lying on the sea-board, and its use is rapidly extending from year to year. Still there are many who have no personal knowledge of its fertilizing properties; and some perhaps who consider it one of the humbugs of the day. An experience of several years, together with an observation of its effects under the management of others, authorizes the conviction that, all things considered, it is the most valuable agent which the farmer can employ, not only for the improvement of lands which he wishes to bring to a higher state of fertility, but for the resuscitation of those long since exhausted.

As the period is now approaching for seeding wheat, in the cultivation of which the application of guano is particularly advantageous, a few remarks may not be unacceptable.

Wheat is, with the majority of farmers, a staple crop. If the expenses of the farm can be paid by other crops, thereby leaving the proceeds of the wheat to constitute the net income, it is fully as much as most farmers are able to realize. It is therefore a most desirable object to attain the highest degree of productiveness, for this crop, of which the soil is susceptible. To effect this, there is no agent which the farmer can employ so prompt in its action, so peculiarly adapted to the production of grain, and—comparatively speaking—so economical as guano. Farm-yard manure may possess every requisite property, but few farmers are in the habit of accumulating enough to manure more than a small proportion of their wheat fields. The

use of guano on wheat would enable them to apply their putrescent manures to corn, which is altogether a more eligible application than to wheat. The one is a gross feeder, and will appropriate to itself a vast amount of nourishment, even of the coarsest kind; while the other requires a food of a quality altogether more elaborately prepared. Guano supplies a nourishment to wheat which, while it gives abundant vigor to the growth of straw, is yet peculiarly adapted to the formation of grain. It maintains a healthy equilibrium of all the functions of the plant.

In the facility of application to the soil, guano possesses an advantage over farm-yard manure which constitutes an important element in the estimate of its comparative cost. It is distributed over the land with nearly as much expedition as the seeding of it in grain. In two or three hours a single laborer can manure an acre of ground, and raise it at once from a state of sterility to one of the highest productiveness. And this may be done at a season when every day is of great importance to the farmer, since the value of the wheat crop materially depends upon its being seeded in good time. If he has to delay the operation long enough to manure any considerable portion of his ground from the farm-yard, the loss in time and labor will not be compensated by the increased product of the crop. Whoever will take the trouble to make a calculation of the expense of hauling out and spreading the manure from his farm-yard—estimating the requisite time and labor as so much money, for time *is* money—he will be convinced that the culture of wheat under this management is rather a costly operation; and that the limits of his field must necessarily be greatly circumscribed. But by appropriating his manure exclusively to the corn crop, the carting it on the ground is done at a time of comparative leisure; and it is applied to a crop, above all others, indispensable to the comfort and well-being of every living creature on the premises, both man and beast. If he is reduced to the necessity of appropriating the proceeds, or any portion thereof, of his marketable crops, to supply a deficiency of corn, he is not only expending, to that amount, what should be regarded as the net income of the farm, but he is taking a troublesome and circuitous route to supply his wants.

A just regard to economy would therefore appear to indicate that all the resources of the farm should be applied to the production of corn, while other appliances, such as clover lays, and green crops, and bought manures, should be resorted to for the purpose of increasing the product of wheat; or, in other words, of augmenting the value of the income. Of these appliances, the object of this communication is to recommend the use of guano to those who have not yet become acquainted with its merits. With a floating capital of $100 to $500 according to the size of the farm, every farmer has it in his power to quadruple his crops of wheat. He will be under no necessity of sowing wheat on poor land, as is now done in the majority of cases, for with almost no labor he may render every acre alike productive. He may also extend his crop over any desirable amount of surface, limited only by the labor he has at his disposal. He may calculate, one year with another, of obtaining from every hundred pounds of guano an increased product of from five to six bushels of wheat. He may with reasonable certainty, dependent only upon the character of the season, expect a luxuriant growth of clover to follow the crop of wheat. He needs not to have any waste or unproductive land on his farm; for however impoverished his soil may be, the productiveness of the whole is equalized by the judicious use of guano.

These advantages—and the experience of many persons has shown them to be solid and incontestible—greatly more than counterbalance the actual cost of guano. It is very natural that a farmer of careful habits, and accustomed to the old routine of cultivation, should hesitate, if he does not refuse, to buy manure at $45 or $50 a ton. But if he will once consent to make a beginning, the fine appearance of his crops while growing, and the increased value when he sends them to market, will effectually banish old prejudices, and convert him into a zealous advocate of improvement.

The limits of this paper will not admit of many minute details of the actual results of guano; and yet it would not be proper wholly to omit them. Amongst the most interesting which have come to my knowledge are those which have been obtained in the neighborhood of Sandy Spring in Maryland, where guano has for years been used extensively by a large number of farmers, on a soil for the most part exhausted by former improvident cultivation, and exceedingly difficult to reclaim. Had it not been for the intelligence and untiring energy of the population, it must long since have been abandoned for a more fruitful region. During a recent visit to that place I learned that the Sandy Spring Farmers' Club had kept a faithful record, since its institution, of the products of the several farms belonging to the members—not with any view to publication, but solely to satisfy their own curiosity. The facts were of so striking a character that I applied for a copy of the table, which, by consent of the Club, has since been kindly placed in my possession. The following is a copy; but, in presenting it, it is proper to premise that a small quantity of bone dust was used in some cases in addition to the guano.

"Average crop of each member for the following years:
1844. Wheat, 102 bus. on 10 acres, or 10 bus. per acre.
Corn, 310 bus. on 13 acres, or 24 bus. per acre.
1845. Wheat, 142 bus. on 10 acres, or 14 bus. per acre.
Corn, 245 bus. on 12 acres, or 20 bus. per acre.
1846. Wheat, 146 bus. on 13 acres, or 11¼ bus. per acre.
Corn, 295 bus. on 14 acres, or 21 bus. per acre.
1847. Wheat, 146 bus on 16 acres. or 15 bus. per acre.
Corn, 390 bus. on 17 acres, or 23 bus. per acre.
1848. Wheat, 309 bus. on 17 acres, or 18 bus. per acre.
Corn, 500 bus on 16 acres, or 31 bus. per acre."

While this table exhibits a considerable aggregate improvement, there are yet some fluctuations. These are to be ascribed to the peculiar character of the seasons—1845 being excessively dry, and unfavorable for corn; and '46 being equally unfavorable for wheat.

A statement was also kept of the product of hay and some other crops, such as clover seed, buckwheat, oats and potatoes; but they were omitted in the copy of the table which I received. I am able, however, to state from memory what one of the members informed me of the increased productiveness of his meadows. When he purchased his farm, only a few years ago, he was only able to cut one wagon load of hay the first season, which he said could not have exceeded 1200 or 1500 pounds. Last year (1848) he mowed 60 tons of best timothy hay. He had used bone dust in small quantities, as well as guano, in reclaiming his meadows.

To another farmer residing in the same neighborhood, but who had not been a member of the

Club, I spoke of the statements above cited; and he remarked that his own experience would fully sustain them. On a farm of some 200 acres, he said that, until he begun to use guano, he had never raised more than one hundred bushels of wheat in any one year, nor more than one hundred barrels of corn. Last year the crop of wheat amounted to 338 bushels, and the corn to 320 barrels. His grass crops were augmented in similar proportion.

The largest crop of corn per acre that I heard of was 72¼ bushels, from an application of 600 pounds of guano. Without the guano, the land would have produced from three to four barrels, according to the season. This, with various other crops of most luxuriant growth, including the wheat crop of last year of 444½ bushels from 25 acres, was grown on a farm which a few years ago was bought at two dollars and ten cents per acre—being part of an extensive tract formerly completely exhausted by the culture of tobacco.

On another farm in the same vicinity, long and not inaptly known by the name of Poverty Plains, an experiment was made last year upon six acres, which had been lying in broom-sedge from almost time immemorial. A dressing of 250 pounds of guano per acre was given to it; and the product of the whole was forty barrels, being nearly seven barrels to the acre. And since I have been writing, a gentleman of this neighborhood informs me that on similar land, and from 200 pounds of guano per acre, his crop this year cannot be estimated at less than six barrels per acre.

Details of this character might be multiplied if time and space permitted.

The objection which seems to be instinctively urged by nearly all persons who have not used guano, is that it is transient in its effects. It would certainly be unreasonable to expect that the small quantities which are generally applied should continue to produce a marked effect year after year. An agent which acts with such wonderful energy must of necessity exhaust itself in a period of time proportioned to the energy it displays. Farm-yard manure would do the same if it could act with the same power. In every branch of business, an investment that will double itself in six or twelve months is justly considered as exceedingly profitable. An investment in guano will do this; and if it was to do nothing more, it ought to commend itself to the favorable regard of every judicious farmer. But it will do more. It will also secure a crop of clover or of grass—thereby furnishing the farmer with the means of perpetuating the improvement of his lands at inconsiderable outlay for each succeeding year. If applied in large quantities, its duration will be more permanent; and I have known of several grain crops, all of them abundant, which were derived from a single application to poor land. But the most judicious use which can be made of guano is probably to repeat it in moderate quantities at the commencement of every rotation.

For land of medium quality, such as will yield about 8 bushels of wheat, it is customary to put on about 200 pounds per acre. If the land is better, the quantity may not be so great; or if it is very poor, it may be increased to 300 pounds. These remarks are intended to apply to Peruvian guano: if the Patagonian is used, fully one-third more is necessary in order to secure the same results.

It is best to plough the guano in as deep as the farmer is willing to plough his land; but as this cannot always be done in preparing for wheat, and as the guano should be got in with as little exposure to the air as possible, it will be sufficient to incorporate it with the soil by the same operation as that which is used in getting in the wheat;—say with a shovel plough or any other implement which will thoroughly stir the soil to the depth of three or four inches.

These remarks are intended to apply more particularly to the state of things in middle and lower Virginia, as the writer possesses no intimate acquaintance with the general system of management elsewhere; but with some modification, they will doubtless be applicable to that which prevails in the adjoining states. T. S. P.

Petersburg, Va., Aug., 1849.

NEW THEORY AS TO THE CAUSE OF THE RUST IN WHEAT, FIRING IN VEGETABLES AND BILIOUS, INTERMITTENT AND REMITTENT FEVERS. By Dr. MORTON, of Virginia.

To the Editor of the American Farmer.

Mr. Editor:—In the general excitement on the subject of agriculture, I feel desirous to contribute something to the good cause; but fear, that any space, which I could reasonably claim in your columns, may be too short, to do justice to my own views, on the subject I have chosen. I shall, however, be contented, if I can say enough to excite others to an investigation of their correctness.

I have long thought that putrid water was the cause of *rust* in wheat, *firing* in tobacco, and *bilious fevers* in the human system. Moisture is absolutely necessary to the life of plants, and they flourish or fail, proportionally to the mode and quantity of its administration. When the rain falls gently and just enough to combine with, and be absorbed by the earth, they flourish; when it falls in excess and super-saturates the soil, in hot weather, the redundant portion must necessarily stagnate and become putrid. It then is changed in character—is no longer the suitable menstruum for the food of plants, but conveys to them poison with all their nutriment. This is the leading idea, the foundation of the theory, which I advocate.

Every experienced and observant farmer must have noticed, that the vegetable diseases indicated above, prevail chiefly during, or soon after excessive rains. This observation has led some to conclude that they are caused by an exuberant supply of sap, rendering the delicate vegetable vessels turgid, and causing them to burst, from repletion. Others have supposed that very wet seasons being peculiarly adapted to the growth of fungi—not only of those which grow in the ground, but also of such parasitical fungi, as draw their sustenance from other plants—these diseases are nothing more than the ravages of these Cryptogamia, on more valuable vegetables.

Were the first of these opinions correct, we might expect plants growing in water—often changed to keep it fresh—with nothing but a bat of cotton to support them, soon to be overcome with repletion, by such an exuberant supply of sap. They, however, grow with very peculiar luxuriance, even at an age when their vessels might be supposed to be particularly tender, and little able to bear distension, if duly supplied with fresh water. Greenhouse plants too, flourish, in proportion to the frequency of the supply of fresh water, care being

used to keep the holes in the bottoms of the pots open, to afford free vent to the old water, previously supplied. From want of attention to keeping these open, the accumulated water frequently becomes sour, sickening and often killing the plants. It is acknowledged to be more difficult to disprove the opinion, that these diseases are caused by fungi. Neither is it practically important to settle this point; as the same management, best calculated to obviate putridity of water in the soil, would also be preferred to prevent fungi. It is believed that fungi and animalcules are intimately associated with, and are probably the agents in all putrefaction, vegetable and animal. The mode of their generation is unknown—possibly nature has provided the semina of one or the other, in all destructible substances, to be developed, when their action is required. The agency of fungi, on dead vegetable matter, is often before our eyes. It is here they seem to be performing their appropriate functions. When I find them on the living, I generally conclude that it is only on the parts dying or killed by some other cause, that they are operating; and on trees and the larger vegetables, seldom fail to find that cause to be *insects* in some shape. I conclude that fungi were intended to destroy dead and not living vegetable matter. It should further be remarked that very minute insects are frequently mistaken for fungi. The small downy aphis so often seen in wet weather, on Briza and other grasses, very much resembling the larger downy aphides, which infest the roots and other parts of neglected apple-trees, is very commonly thought to be mildew. Real mildew, as before remarked, I have not found, except on dead vegetation. Its mission seems to be to decompose, when dead—not to kill. Parasitical plants, drawing their nutrition from other living plants, flourish only in proportion to the vigour of their adopted mothers. When the living juices fail, on which they subsist—they die. It may be said, that all this is mere surmise and opinion. I may candidly admit this, and still maintain that it is rational and plausible. This is all that can be asked in matters inscrutable by the powers of human perception. Again—were fungi the cause of the vegetable diseases in question, we might expect to see the same kind of fungi on the different plants, or at least, some similarity in the diseases. Wheat growing on land soured by putrid water, has visible cracks on the surface of its straw, and the rusty fungi, if they be fungi, are visible. Tobacco, similarly situated, manifests no visible fungi, its leaves are covered with brown dead spots, which rapidly spread over the whole leafy structure, while the inner bark of the stalk becomes brown. Even were fungi, in great quantities, to be manifested, it would be just what I would expect, on a plant so prone to rapid decay. Indian corn—a much hardier plant—on such land, in the earlier periods of its growth, turns yellow, but on the return of more favorable weather, recovers its health and sometimes produces a considerable crop. Moreover—the fact, that no combination of moisture and heat will produce these diseases, until the plants liable to them arrive at a certain stage of their growth, would appear to me to militate against the opinion, that the cause is to be ascribed to a fungous origin. Very wet and very warm weather may occur during the last of May and first of June, followed by afflicting drought, the wheat and tobacco, in the meantime promising fair crops, until the approach of their respective ripening stages, when suddenly, this *cholera of vegetables* invades the land and spreads desolation. In this case, it seems to me, more rational to conclude that the poison of the putrid water, after its moisture had been evaporated, was left in the ground or had been absorbed by the crop, ready, in such case, to effect its work of destruction, as the crop approaches maturity; rather than that a host of fungi in time of severe drought, should invade a healthy crop and blast its hopes. Fungi are particularly encouraged by moisture; but it is easy to conceive that they might thrive in vast multitudes even during drought, to feed upon the decayed juices of a succulent crop: and that, if they exist at all, in the diseases before us, they come to fulfil their mission, by feeding on the dying parts of the crops, already destroyed by something else.

We sometimes find, that although there is great excess of rain just before wheat harvest, that crop escapes rust. This may be owing to cool weather about that time, preventing the putrefaction of the redundant water, or to a constant supply of fresh water from frequent showers, which delays putrefaction, until the crop gets beyond the reach of injury. In the latter case, we may look out for foul in the tobacco, however dry the weather may be. We had much rain in this region previously to wheat harvest. I believe that but little wheat rusted, however, and that in springy or low lands. I only hope that the tobacco may escape firing, and from the circumstance, that there was very cool weather, after almost every shower, which must have given time for the loose surplus water to be evaporated and absorbed, before it could putrefy. My own crop suffered very slightly, except on a spot of about ten feet in diameter, immediately on or below the high bank of a hill side ditch, crossing the head of a small gully, in which ditch at that spot stagnant water has remained during the season. I have dwelt more fully on this branch of the subject because my friends have so often objected, "that these diseases of vegetables and wet weather were not always simultaneous."

I, and I suppose others, have observed an exemption from these diseases, on the sites of old tobacco kilns, where there was charcoal enough to resist the putrefying tendency of quiescent water—under the shade of houses and trees, where such water could be kept cool until its escape, and immediately into blind ditches into which the water could percolate while fresh. But for the want of space, I could relate some striking instances of such exemption.

Admitting the foregoing views to be true, it follows that too much pains cannot be taken to prevent land from being poisoned by putrid water. This is to be done by very deep and by subsoil ploughing, by repeated raking not only to pulverize the surface, but to level it, so that there be left no sinks for the habitation of puddles, by a sufficient number of draining ditches, of sufficient depth and fall, to carry off the surplus water, without danger of gullies. If these things be properly attended to in the preparation of land for wheat, the danger of rust will be greatly diminished, as also the danger of winter killing.

In the cultivation of so delicate a plant as tobacco, it is perhaps best that the ploughing be not deep, immediately under the hills, that a way of escape may be allowed for the redundant water in the furrows between them, which should be deep and carefully graduated. One of the best managers of tobacco I have ever known, made his rows four feet apart, crowding the plants in the row.

wide space between them, afforded an opportunity of making wide and deep furrows, which being kept well cleaned out, conducted the water into ditches, prepared for its conveyance away. This was on springy land, with a foundation of very tenacious clay. The crop on it escaped firing, while that in the neighborhood suffered greatly.

That simple water, when it becomes putrid, will poison vegetation, has often been manifested by emptying such water on the grass from a vessel, which had long stood (in hot weather,) under the gutter of a house. I once knew a deep pit filled with such water, to be emptied out on some rank clover. The water ran in a stream for perhaps an hundred yards, and killed as dead as if it had been boiling hot, not only that clover, on the leaves of which it was poured, but all, to the roots of which it had access.

We come now to the agency of putrid water in causing bilious fevers. A few remarks on this branch of our subject, I trust, will not be considered out of place in an agricultural journal. Agriculturists have as deep an interest in, have done, and will still do more than any others, towards the prevention of disease.

It has long been a common opinion that fevers of this kind were produced by what has been called "Marsh miasma," or some unascertained vapour, arising from rapidly decaying vegetable matter. This opinion, doubtless, took its rise from the fact, that such diseases in ordinary times, prevailed only in the vicinity of marshy lands. I practised physic for many years in Prince Edward county, Va., a high, dry and not very fertile region. The low grounds on the creeks, on account of their great value, were generally very well drained and cultivated, and their surface wholly exposed to the sun, the great purifier of earthly things. I believe I could readily count on my fingers all the cases of bilious fever, strictly so called, which came under my care, during about twenty-five years. Moreover, the majority of these consisted of soldiers dismissed from the army, in the tide-water country, during our last war with Great Britain, and of citizens who had travelled out of the county, into regions liable to such maladies. During all that time the wheat and tobacco suffered comparatively but little from *rust* and *firing*. Since then, the seasons have generally been more rainy, bilious fevers have been more common, in that and the surrounding counties, wheat crops have been precarious on account of rust and other diseases, and I believe there has been but one generally good tobacco crop in a dozen years. In 1846, nearly the whole state was grievously afflicted with intermittent and remittent fevers. In Halifax county, the pestilence raged almost fearfully. This is a high, dry and generally healthy region. Such diseases then prevailed even in poor barren tracts of country, where there was but little vegetable matter to putrefy, and even on the mountain tops, they raged distressingly. It is also an established fact, that they occasionally occur in sandy deserts where vegetables hardly grow at all. I have therefore concluded that there is no poisonous exhalation from putrid water, without the intervention of vegetable putrefaction, which is the cause of the diseases above mentioned, human or vegetable; and that this exhalation will always produce them in hot weather, whenever water has been in quantity vastly beyond the earth's power of combination and absorption, aided by evaporation into the atmosphere.

I cannot conclude these remarks, too brief and desultory for the importance of the subject, without expressing my joy, that Maryland has so nobly buckled on her armor in the good cause of agriculture, and that her cheering shouts have wakened up some noble spirits in the Old Dominion. The horn of Roland has sounded again. I trust there are many willing to follow in his lead. Success to every effort to make a big garden of our land! A statue to *John S. Skinner*, long—long before he dies!

I have abbreviated the foregoing communication as much as my time would allow, in order to accommodate it to the design of your valuable journal. Articles filled with speculation, and flourishing agricultural addresses ought rarely to appear in such a work, and never to supercede far more valuable practical essays. W. S. MORTON.

Cumberland County, Va. Aug. 14th, 1849.

THE BAY-SIDE OF TALBOT.

AUGUST 27, 1849.

To the Editor of the American Farmer.

DEAR SIR:—I have noticed communications, in the last numbers of your paper, lauding the efforts of some of our enterprising farmers of Talbot, and other counties of the State; and as I observe also, the journals of your northern competitors, exhibiting on their pages—to a praiseworthy extent—the beautiful science of husbandry, practised by their sterling cultivators of the soil; I am tempted with like notions, to picture a portion of one of the fair sections of our county—the *Bay-side*—but in the meantime, more especially portray to the impartial minds of my brother farmers, two of her noble sons; noble in sentiment, in principle and in deed. I started with a young friend, from our county town, on a bright sunny morning, when every thing was smiling with the golden beams of the glorious orb of day, to pay my first visit to that delightful district of country. The green corn was slightly waving in the gentle breeze; the pure invigorating country air—that many of your citizens have seldom a chance to appreciate—that laved our temples with its delicious softness, ladened with the perfume of many a bright flower by the way-side, eliciting our admiration. The rich silks and grateful tassels were handsomely displayed, picturing to the imagination a gay regiment of noble grenadiers, with flashing scarfs, and tall feathers doffing in the distance; but what was still more pleasing and interesting to the eye of the farmer, the luscious ears hung heavily from the stalks, indicating a cap will filled. We had a beautiful road before us, as level and as smooth as the most finished turnpike, with scarcely an undulation, and shaded most of the way by the majestic oaks of the forest, entwining their noble branches over our heads, and forming an arched-way, sublime in prospect, and as delightful in shade.

The farms along which we passed, spoke in a language more powerful than words, that a glorious spirit of enterprise had already aroused the gentlemanly proprietors to the noble work of improvement. The axe and hoe had long previous leveled to the earth, every shoot and briar—and the plough, that noble implement of the farm, had done its work in the beautiful preparation of the fallow. The snowy flocks of sheep, that most interesting and profitable of all stock—in the humble opinion of your correspondent—were luxuriating on fine pastures; and the noble herds of cattle were resting

under the cool shade of some neighboring tree, or cropping the rich grass, at their leisure. A bright picture of rural scenery and rural occupation, lay penciled before us, and the road winding by the river-side, brought suddenly in view a broad sheet of crystal water, mirroring the rich blue of the arched heavens above, and dotted with the white sails of the fairy barks, leaping joyously over its bosom, with the homesteads and farm buildings, handsomely, and sometimes picturesquely grouped, adorning and beautifying its shores. Passing through the pretty and growing village of St. Michael's, we in a short time arrived at the residence of our kind and gentlemanly entertainers, who met us at the door with that cordiality and pleasantry of manner which distinguishes the Eastern Shore farmer and gentleman of the old school, and I can assure you, sir, I felt grateful for the reception; for what can be more pleasing to the senses, when visiting a strange neighborhood, than to feel the pressure of the warm hand of friendship, and gaze in the face glowing with genuine hospitality; you can in after life, look into the mirror of the mind, with a pleasure unalloyed, in bringing back to the memory again a happy pastime, spent in a beautiful country, and in delightful company.

It was there we witnessed the most perfect farming we had seen lately; the out-buildings, yards, fences, every thing, were in the most complete order,—it was in truth a feast to the eye to gaze over their broad acres, handsomely fenced with plank, in the highest state of improvement, and carpeted with the artificial and natural grasses, or growing luxuriant crops of corn—not a single weed, briar, sprout nor thistle, marked the beautiful prospect, but every noxious plant was carefully plucked from the soil—in a word, sir, I am confident their several farms will bear an admirable comparison with any estate or section of country throughout the State. A short time after our arrival, at our request, their fine and genuine flock of South Downs, were driven up for our inspection; and I question whether a rarer and choicer specimen can be produced. They have an excellent eye for the points of a good breeder—and like another worthy and esteemed fellow-citizen of our county —appear to take much pleasure in the rearing of that admirable stock, which only speaks in language as pure and beautiful as their snowy fleeces, the fine taste and cultivated minds of their noble-hearted owners. After tea, we were invited to examine their stock of short horns, that were penned on an extensive bed of compost, hauled into their barn-yard; they were very good, the cows displaying fine points as milkers, and the oxen, size and muscular proportions for the draught. As to their teams of mules, they need no commendation from me; their remarkable size and appearance have already won them the highest meed of praise.

We were up the next morning, enjoying the pure air, and walking out on the lawn, ere the bright face of the golden orb had peeped above the horizon, witnessed his first rays gilding the beautiful tapestry of forest—his rich mellow light, dancing on the limpid waters of the inlet, that winds gracefully around the homestead, and the majestic river that flows past, with one grand sweep to the bay—'twas a lovely scenery, and the humble goose quill cannot express that sublimity of thought, the gentle whisperings of the soul, that filled each bosom with delight, in gazing over the magnificent landscape.

I must now, sir, crave your pardon for occupying so much space in the pages of your invaluable journal. I have abbreviated though, as much as possible, and have left unsaid a great deal respecting the exemplary management of our esteemed friends, that was truly interesting and profitable. That every cultivator of the soil—the practical poetry of life—may shortly reach to as high a perfection, is the sincere desire of CHOPTANK.

Although "*Choptank*" has not designated by name the proprietors of the above beautiful farm, we can hardly be mistaken in recognizing in his description the homestead of those public spirited farmers of Talbot, Messrs. *S. and W. Hambleton.*

CHAPPELL'S SALTS.

To the Editor of the American Farmer.

Just released from the toil of threshing such a crop of wheat as I may happen to have raised, it gives me pleasure to pay my respects to one so delightfully didactic as your correspondent "Fair-Play."

Thanking him for his kind civility in warning me of my danger, I have not the least fear that a want of that faith, which he so aptly teaches, will prove quite ruinous to me.

As to whether I am or am not a very poor farmer, it is a question about which those who have a good understanding as to farming in general, and an accurate knowledge of my farming in particular, will indulge their opinions; but I do not flatter myself that "*Fair Play*" has excited in those who know me not any of that kind interest which he seems to feel for my welfare.

That I have ever rejected sound testimony upon any point connected with my occupation, is but one of his kindly fears—and, as far as the Fertilizer was concerned, it will be seen that I expressed myself as nothing doubting that the effects alleged had followed its application.

Choosing, as I did, to "await a more convenient season," I was of course willing to let others reap such advantage as the truly faithful might, by making large purchases, and such losses as the lukewarm by purchasing to a small extent, sure that, as in all matters of faith I could not find myself in a position much worse than the latter, and might find myself in one much better than the former, by continuing in the same course I had pursued, with such success as I may have done.

Taking it for granted that the knowledge which led to the peculiar composition of the "Fertilizer," had in reality been derived by chemical "analyses of fertile soils," and having never been informed that its fortunate inventor was invested with a right to stifle the spirit of investigation, I presumed that the same art might be used in detecting the deficiencies of unproductive or *partially improved* soils.

If I have infringed upon his rights, I must plead ignorance as my excuse, humbly informing his champion "*Fair Play*," that I live in a benighted region where, though the dawn of true science is but dimly seen in the distance, the flickering light of humbuggery has ceased to illumine, and none are found wearing that mantle of mist in the ample folds of which "*Patuxent Planter*" seems to his delighted eye so snugly enveloped.

Having premised thus much, I proceed to answer the questions propounded by "Fair Play," presuming that it is his design, by some such magical process as the play of affinities, or, possibly by the

of transmutation, to enlighten your readers by the answers of one whom it seems necessary to his purpose should be looked upon by them as a very poor farmer.

Question. "How do you proceed in other matters?"

Answer. According to circumstances.

Q. Do you have your soil analysed to know whether stable manure or guano are necessary?

A. I *do have it analysed*, in order to inform me of, as near as possible, the special deficiencies of the unproductive portions as compared with the productive.

Q. Are you aware that in giving your land a dose of "salts," you are giving it the same ingredients, &c.?

A. If he means by "salts," the same article that was analysed by the state chemist, and afterwards by Dr. Stewart, since I once saw two chemists separately analyse portions of the same specimen of a given substance, and arrive at precisely the same results, and know that the gentlemen above named are not a whit their inferiors, if I take for good the statement that *they* have differed in their analysis of the "salts," and add to it the fact, that the specimens examined by them were obtained from different sources, I could not be supposed to *know* any thing certain with regard to it.

Q. "If you had the ague and fever, would you prefer bark to quinine, or poppy to morphine in cholera?"

A. I should consult my physician, if, as is usually the case, I should have one at hand; but if left to myself, I should prefer either to any quack medicine which was set forth as a cure for all diseases.

Q. How did you ascertain that good stable manure would produce good crops—was it not by experience?

A. Such knowledge as I have of its effects *is* derived from *experience*.

Q. Can you point to any page in any chemical work where it is stated, that any farmer has derived advantage from analysis of his soil?

A. It might as well have been expected to see in a work upon steam an account of the navigation of the ocean, or any particular river, by a steamboat before the vessel afterwards employed for that purpose had been built, or before steam had been employed, or of the various modifications of the steam engine before they were discovered, for the purpose of navigation. If, however, it be true that analysis was employed to detect the constituents of fertile soils, in order to the composition of the "Fertilizer," and it has proved advantageous to my farmer, it is plain that he has derived advantage from the analysis of some soil, perhaps another's, and if benefitted by analysis of another's, it is not beyond the range of credibility that he might be benefitted by analysis of his own.

Give us the "practical results." If he means of the faithlessness of myself and of those who have preceded me, although it may seem like bragging, I will do it for his gratification. They have been, to have increased at least three fold the average of all kinds of grain, and to the same extent the capacity of the soil for grazing, and to have kept clear of sterils; and for the economical application of that substance which has mainly contributed to these results we have been largely indebted to the use of chemical analysis. Those spots, sickly and yellow, are much fewer and farther between, but *such as* are now to be seen remind me that I have a well tried friend not yet specially consulted with regard to their specific defects. That they are specific, I am convinced, for the reason that they have had the same applications as the other lands adjacent, and yet produce crops sickly and yellow.

According to my theory, it *would* be a waste of money to put upon fertile soils substances in which they abound.

"How long would it take a chemist to examine my whole farm?" It would depend upon the number of specimens examined. To do it correctly would require, I presume, about ten hours to each specimen.

"How long would it take to analyse the state? *Ans.* I take it for granted that it will never be *all* analysed, but think it likely that the practice of analysis, once commenced, will, like the practice of manuring, go on till the end of time.

As to his doubts about the skill of the chemist I might happen to employ, it is just as fair that I should doubt the skill of the chemist upon whose "analysis of fertile soils" the Fertilizer is compounded.

"Could he mark the ground with a stick?" Yes, or with a stone.

"Guano is applied at the rate of 300 pounds to the acre with very successful results." I have heard so before, and need no other fact to convince me that it is not necessary in all cases to apply *all* the constituents of fertile soils, supposing them to be the same set forth in Mr. Chappel's advertisement.

"Do you conceive it possible for any chemist to detect by an analysis of the soil to which the above quantity of guano, or the salts, had been applied, the active ingredients imparted to it," &c.? Leaving the salts out of the question, as they are for the present above chemical research, I answer in reference to the guano, that if it be applied regularly over the land and intermixed with it to a depth not greater than six inches, two at least, and, probably, three of its active ingredients can be detected, and in such quantities as to be appreciable by weight, supposing Dr. Ure's analysis of guano to be a fair standard, and supposing the specimen of soil examined for them to be taken immediately after its application. "Is it possible that three chemists would agree in their analyses of a soil?" I know that two can.

Turner, 7th edition, page 763, is not to be found hereabout. We know that Turner was a chemist celebrated for his high attainments, but we have yet to learn that he devoted any great share of his "acumen" to the analysis of soils anywhere, and much less of the varieties of *deteriorating* or *partially improved* soils of Maryland.

In conclusion, inasmuch as "Patuxent Planter" has been held up by Fair Play as a light to us who wander in darkness, I am willing, under a belief that he is not quite smothered by that last fold of the mantle of faith which has been thrown around him, to submit to him in such a way as need not make us personally known to each other the evidences which have led me to believe that "the active ingredients" can be appreciably detected, and that *two* chemists would agree in their analysis of a soil, on condition, that Fair Play shall place in the hands of the Editor of the Farmer ten barrels of the "Fertilizer," which shall, by analysis of a chemist chosen by Patuxent Planter, be proved richer in ammonia, and the elements already detected by them, than the specimens heretofore reported upon,

to be delivered to me free of other cost than transportation, in case said Planter shall be convinced by the evidences submitted. On my part, I am willing to bind myself in case of failure, to purchase, at cost, the ten barrels, and give Patuxent Planter satisfactory security that I can be relied on to make an accurate experiment of its effects, and give a fair account of "practical results." Fair Play may be very fair, but surely not more so than COLLINGTON.

TALBOT COUNTY CROPS, &c.

ISLAND CREEK, Talbot Co. Md., Sept. 6th, 1849.

To the Editor of the American Farmer.

DEAR SIR:—Having a leisure which has become irksome, I have taken up my pen in order to dissipate the time, which at present is hanging upon me so heavily; I know of nothing though, in which I may even hope to entertain either yourself or your many enlightened readers, unless I mix up a little dish of "Agricultural gossip," which if suited to your taste, you may spread before your monthly readers.

Well, to commence, the harvest is ended, bringing to some of our neighboring farmers, more disappointment than grain, while a few others have had the satisfaction to gather much more than they ever calculated upon. The wheat has not in many instances, been commensurate with the crop of straw, and thus have the "knowing ones" been deceived in the calculations made whilst it was growing.

The wheat known as the Mediterranean upon certain soils here, has been the most certain for good crops at "harvest." It is said to be less liable to *smut, rust* or *fly*, but one disadvantage belonging to it, and which perhaps is the principal cause it is not generally cultivated, is that it contains fewer grains to a head than some other varieties.

The "corn crop" is not good; indeed, fears were entertained some weeks ago that this important crop would entirely fail this season, on account of the great drought we were suffering under at that time; but that SUPREME, OMNIPOTENT and PROVIDENT BEING, in his own good time, sent to the earth his refreshing and grateful showers, which caused the farmer to smile at the prospects of a sufficiency.

Through the courtesy of one of our agricultural friends, I have been favored with the perusal of several numbers of that highly valuable work "The Horticulturist." This work is got up with much taste, full of interesting matter for the Pomologist and Florist, as well as for the Horticulturist generally. I have been highly pleased with Mr. Downing's articles, as well as with many of those of his contributors. For some length of time I have been much interested in the history and habits of the Pear in the Horticulturist. Several treatises upon that valuable and delicious fruit gave me great satisfaction, but with due deference to Mr. Downing's learning and experience in Pomology, I am under the impression that both himself and many of his correspondents, are mistaken as to the treatment of this fruit.

In all the treatises in the Horticulturist that have come under my notice, it is recommended that the PEAR SCION be grafted upon the QUINCE STOCK. Now I have ocular proof that this is unwise, or at least that it is wrong, as it has been practised in this neighborhood. The pear scion will do very well for a short time, but in a very few years, generally, long before it fruits, it will outgrow the quince stock, and the certain consequence will be that it will break off, and thus you lose the fine fruit which you have been perhaps for years anticipating. A friend and neighbor just across the creek exhibited to me this morning several trees in this situation; they were pear scions, which had been grafted upon the quince stock. Only a year or two ago and they had become so "top heavy," that my friend has had to top them to save them through the summer. And the place where the graft is joined to the stock, is at this time almost as large again as the stock, threatening to break off at every gust of wind. When first I heard the quince suggested as a stock for the pear, this objection arose in my mind, and my neighbor's experience strengthens my opinion.

The apples in this neighborhood I am sorry to inform you, are all more or less defective, and those who heretofore have had a plenty of this delightful winter fruit, will have to do without it through the long cheerless nights of the coming January and February. I should be highly pleased if this prophecy should fail, for in common with many others, I am extremely fond of the winter apple, which is so much enjoyed of a cold night whilst one is snugly ensconced by the bright burning and cheerful fireside.

Mr. ——— the friend of whom I have already spoken, has on his farm some very ancient "grafted" pear trees, the fruit of which is as fine as any I have ever tasted; he is not satisfied about the proper name of this excellent fruit, and speaks of sending you a sample of it; it is to be hoped that he will do so, and that you may be able to give him its proper name. I have had in my possession several of these fine pears; they are small with a rough skin, a brownish color on one side, and the other somewhat speckled, juicy and melting; the trees are not large, one or two of them being upwards of three feet across the stump; the principal curiosity about these trees, to my mind, is the fact of their having been "grafted" at such an early date. I had supposed that grafting on this shore had been practised but comparatively a few years, while these very old trees prove that some of our earliest Talbot farmers knew its great advantages.

The Horticulturist mentions the success of several experiments, which I am glad to see, on account of my ever dear friends "the ladies" (God bless them) it is no less than the grafting or budding of some of the finer fruits, with the grafts or buds "reversed," for the purpose of forming a "weeping head," which must be very beautiful and quite a curiosity, as well as affording fruit which may be easily procured, by our ever to be cherished and adored "sweethearts," wives and daughters, to say nothing of our fond mammas, and decrepid grand-ma's. After the grafting or budding is performed (reversedly) and the grafts or buds begin to grow, an iron hoop is thrown over them in order to keep them down, which nature without this force is applied, would assuredly cause them to lift their head like a "proud man." I hope we shall hereafter have in our gardens weeping cherries, peaches, apples, &c. See to it good ladies.

Our farmers are continually getting more and more alive to the great benefits conferred upon the "glorious profession" by a judicious course of reading, and of late one of our county papers, (which very properly has an "agricultural department," after having been always "respectably" conducted, has changed hands, and become a "hebdomadal

eat use to the farmer, as well as an excellent
er to his amusement and edification. Several
les over the signature of "Corydon" are excel-
, and as they are chiefly upon agriculture, I take
liberty of recommending them to your notice,
oved as it is. Indeed "The Star" may be
idered an auxiliary to your own excellent and
qualled Farmer.

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, and it will always be a pleasure for me, when-
it may be in my power, to forward the agricul-
l interests of my native and well beloved State.
The friends of agriculture in this part of the state
buoyed up with the strong hope, that the "State
ricultural Society" will continue to make re-
ted efforts for the successful establishment of at
t four or more Agricultural schools throughout
state. They know that the business is in good
ds, for no one can doubt the patriotic views of
t excellent society. I am extremely sorry to
rn, though, that it has been endeavored to give
admirable project a political caste. God grant
t the good sense of the people may prevail over
such interested movements.

still bear in mind (and shall continue to do so,)
kind promise you made me when last in your
, to accompany me on a visit to the hospitable
idence of that excellent practical farmer, and
mplished gentleman, Col. Horace Capron.

With the strong hope of seeing you at our con-
plated Fair, I bid you adieu.

Yours, E. F. R.

FREIGHT ON GUANO, &c.

MONTGOMERY COUNTY, Dec. 20, 1848.

the Hon. the President of the
Baltimore and Ohio R. R. Company:

Sir:—At the last quarterly meeting of the Agri-
tural Society of this county, the following reso-
ion was unanimously adopted, viz:

Resolved, That it is the opinion of this Society,
t a reduction of tolls on guano and other fertili-
rs, by our Internal Improvement Companies is a
tter of great importance to the agricultural in-
ests of this county, and that the President of this
ciety be requested to communicate with said
mpanies for that end.

In executing the task imposed upon me by the
egoing resolution, I beg leave respectfully to
serve, that it has been adopted under the full per-
asion, that the benefit sought to be obtained for
e agricultural community can be extended with-
detriment to the interest of the Internal Im-
ovement Companies of our State, and, ultimately,
their great advantage.

It will be unnecessary for me to go into any argu-
nt to show how valuable and important all ma-
ures, mineral, vegetable and artificial, are to agri-
lture—particularly upon old and long settled lo-
calities. It will be sufficient to cite, the gardens and small farms immediately in the environs of your own city, where, by a skilful and liberal use of manures, the sand-hills around Baltimore have been made to produce as delicate, healthful and luxurious fruits and vegetables as are to be found in any other more favored section of the Union. I hazard nothing in saying that without the meliorating influence of the manures thus supplied, you would have nothing but a scanty and unwholesome production, and your markets would have to be supplied from a distance with stale, and, consequently, unhealthy fruits and vegetables. What manure has done for the immediate vicinity of Baltimore, it can and will do, if obtained, for the old and worn out lands in the middle counties of the State. But the difficulty is to obtain it at a cost to induce farmers more generally to engage in its use. To lessen this difficulty, and thereby induce a more general effort to improve our old worn out lands in Maryland, is the object of the resolution which I now have the honor to transmit to you.

The charter of almost every Internal Improvement Company which I have examined, (and I believe yours is not singular in this respect,) asserts either directly or indirectly that to "PROMOTE agriculture," and "encourage commerce," are its leading objects. If to *promote agriculture* was a primary object, and a main argument by which the sovereign authority, (the people of the State,) through their Legislature were induced to grant the chartered privileges that the Internal Improvement Companies have now obtained, I venture to suggest that it is the bounden duty of these companies to redeem the pledge, by which they obtained their chartered existence. To transport to market the productions of the soil without a return of some fertilizing substance, is not to *promote* but to *reduce* agriculture. The correctness of this proposition is clearly demonstrated by the present exhausted and impoverished condition of large portions of Harford, Baltimore, Carroll, the eastern part of Frederick, Montgomery, Anne Arundel and Prince George counties, through which most of the works of internal improvement of this State pass. They have, for a long time, been sending to market the productions of the soil, without obtaining more than the very limited, inadequate, domestic supply of manure, made at home, in return, and their present reduced condition is the result. Can it be said that the canals and rail roads which have now been in operation nearly twenty years, through the counties already named, have promoted the agriculture thereof, except in very limited spheres? If they have not, as their present scanty productions, and stationary population proves they have not, then have they failed to promote one of the leading objects of their incorporation—and when it is known that similar works in other countries and in other states of our own country, have promoted agriculture and vastly increased the productions of the soil and population, and, consequently, the wealth of the localities through which they pass, it becomes a very interesting enquiry to investigate the cause of failure here. This investigation it is believed will show, that the canals and railways of other countries, and particularly in England, have started and never lost sight of the great importance of fostering and encouraging the local business along the lines of their respective works. Agriculture being the most prominent and important, has every facility of trade and travel extended

to it. Not only is the surplus productions of the soil, in all its varieties and quantities readily transported to market, but *manure*, according to the authority of Professor Johnson, is, by express act of parliament, required to be transported upon the English railways much lower than any other article. Thus, in the Birmingham and Glouster Railway Act, the maximum authorized toll is, for manure of all kinds, one penny per ton per mile, while coals pay three pence. The Birmingham and Derby, and the Midland counties grants, authorize the same charge, while, according to the same high authority, on the railways on the eastern side, the difference in favor of the farmer is still greater, for while limestone, sand and clay are to pay a penny, *all other kinds* of manures pay but three half-pence; coals, two; sugar, four; and manufactured goods, six pence per ton per mile. The same enlightened policy is still more strikingly exemplified upon the English turnpikes, where even empty carts going for, as well as those laden with manure, are allowed to pass free of any toll whatever. Doubtless, this liberal policy towards the farming interest has kept pace with subsequent improvements in machinery and economy in the working of roads. A popular writer in our own country, in alluding to and commending the English policy already cited in behalf of agriculture, thus forcibly and soundly concludes: "so our legislators, in granting charters to these highways, should exempt from toll, or greatly diminish the charges on loads of lime, guano, plaster, and *all other substances* when going to be used bona fide, and extensively, as *manure*. Nor would these incorporated companies lose any thing in the end, inasmuch as the produce and population of the country to be enriched by the application of these manures would be increased in proportion, and the roads and canals thus fully indemnified, and the *state strengthened* in *numbers* and wealth."

The slender population of our northern States, never slow to emulate a good example, are, rapidly, through the medium of their public works, improving the face, increasing the production, and filling up the population of the districts through which they pass. Why should it not be so in the milder climate and more genial soil of Maryland? Why have we not towns and villages and substantial farm-houses springing up, as in New England, along the lines of our public works to feed the trade and augment the revenues of these companies? it is because the secondary object, the encouragement of commerce has, through the supineness of the farming interest, been allowed to swallow up the great leading object, so far as central Maryland is concerned, the promotion of agriculture. Or is it because the western trade, important as it is admitted to be, has been permitted to overshadow the no less important, though not so extensive local business along the lines of those works? Or is it because equal facilities of trade and travel have not yet been introduced? Or is it because *manures*, the foundation of agricultural improvement, and by the liberal use of which alone, can agriculture be promoted, are charged as high a rate for transportation, as many expensive articles of merchandize, and a higher rate than the great and profitable articles of flour, wheat, or whiskey are charged to the farmers of Virginia, who groan under no burdens, and have contributed, comparatively, nothing to the cost of constructing either our canals or railroads. To some one, or all of these causes must be attributed our want of improvement in Maryland.

The Society, whose organ I have the honor to be, think the last cause assigned the most prominent, and to call attention to it is the object of their resolution. To set it more clearly before you, must be my apology for the length of this communication, and allow me, in conclusion, to ask you to lay it before your Board, and to invoke their early and favorable action upon it.

I have the honor to be,
Very respectfully,
Your obedient servant,
A. B. Davis.

MARL, GREEN SAND, &c.

To the Editor of the American Farmer.

I design to offer a few remarks for your valuable journal, principally, however, in the way of enquiry. In Mr. Ruffin's recent exhibit of his farming operations, in speaking of his marl, he says it contains so much lime, some 38 or 40 per cent., and other ingredients in small proportions, of which nothing is known. Now in lower Virginia we had been taught to believe that this marl, and much other similar in appearance, contained green sand, (silicate of potash,) and that much of its efficacy was owing to this ingredient. Many farmers are using such marl in Virginia under this impression, whence derived I do not know, and believe it superior to *white* marl, containing double the quantity of lime, particularly in its effects upon clover. This superiority is attributed to the green sand. Please be so good as to publish some test, (the most available and convenient you can find,) for silicate of potash, or request some of your correspondents to do so. Possibly Mr. Ruffin may find time to enlighten us on this subject.

In the September No. of the American Farmer, you speak of the decomposing property of lime, and the same property is generally attributed to marl, whether properly I should like to be informed. My impression had been that it was only caustic lime that had any such effect on vegetable matter, and that marl and slaked lime were inert in this particular.

In speaking of roses, you say, "the budding of roses may now be commenced." In my experience the proper time for this is in June, or as soon as the bush has completed its first bloom, and has taken a good start to grow. The bud will then slip its wood, and the stalk its bark for its insertion. Head down the stalk as soon as you perceive whether the bud is living, and the bud immediately puts out. This operation, too, may be done as late as first of August, with the view of the bud being suffered to vegetate the same year. The objection to postponing until September, is that you cannot head down the stalk and permit the bud to put out until the spring: if you do, the growth will be so tender that it will be killed by the cold. You thus lose a good deal in the growth of the rose, and there is, besides, danger of the undeveloped bud, which has not yet a firm hold in its new situation, perishing by cold. I have now a moss rose, more than 1½ feet high, budded about 15th July.

Your circulation seems to be extending rapidly in Virginia. If I may take the liberty to make a suggestion, I would say, endeavor to make the Farmer adapt itself somewhat more to Virginia agriculture. Our farming has not reached the stage yours has around Baltimore, and farther north. We still cultivate large farms, and we cannot expect to enrich them with bone dust, ashes, salt, &c.

Give us a little more on the subject of marl, its proper application, quantity, &c., and the proper depth to plough our lands, both light and stiff. I know it is impossible to please all your readers—utterly impossible—still, I think, Virginia has a right to be heard, as she is sending you such liberal support. ENQUIRER.

Notes by the Editor of the American Farmer.—We are not at the present moment aware, by whom the farmers of lower Virginia were taught that the "*marl*" of that region derived much of its efficacy from the presence, in its coustituent elements, of the "silicate of potash;" but this we will aver, that if it does so contain the "silicate of potash" in any appreciable quantity, that it is to that amount *more valuable* than any other marl in which that mineral may not be present.

The "*marl* or *green sand*" of New Jersey has been proven by the analysis of Professor Rodgers, to consist, in every 100 grains, of 50 per cent. of *silica*, 7 per cent. of *alumina*, 22 per. cent. of the *protoxide of iron*, 11 per cent. of *potash*, 1 per cent. only of *lime*, a trace of *magnesia*, and 9 per cent. of *water*. This *marl* or *green sand*, has worked miracles in several of the counties in New Jersey; transforming almost barren sands into fertile soils, raising the money value of the lands from 2 and 5 dollars per acre, to from 20 to 50 dollars, according to location, and the facilities for procuring supplies of the green sand. By looking at the analysis, it will be seen, that to the *potash* must be mainly ascribed its fertilizing properties, as the small portion of *lime* contained in it, is entirely too minute in quantity to have produced any very sensible effect, unless where the mineral may be used in unnecessarily heavy doses.

Our correspondent asks us for a "*test*" to ascertain the presence of *potash*. We have not been able to put our fingers upon one in the books, but give the following as one to be relied upon:

Process to ascertain the presence of Potash in Marl. Boil a given quantity of *marl* in successive portions of *nitric acid*, until the acid refuses to take up any more. Then throw your solution upon a *filter* to separate it from the insoluble residue, and after the whole has passed through, pour water upon the *filter* until it passes through perfectly pure. Then evaporate the solution to dryness, and put the residue in a crucible, heat to redness, and add powdered *charcoal* to it, small quantities at a time, until it ceases to cause vivid combustion, then pour the contents of your crucible into boiling water, and boil as long as the water continues to dissolve any thing—filter the solution thus obtained, and then evaporate it to a small bulk, then add *tartaric acid* in excess to it, set it aside some hours, and you will have a bi-tartrate of potash, from which you can easily calculate the amount of potash."

Both *lime* and *marl* proper, possess the property of decomposing organic, vegetable and other matters found in the soil. *Caustic* lime is more active in the exercise of this property than *mild* lime, but still the power is existent in all *calcareous* bodies however effected they may be. The reason of slacking lime arises from the fact of its being too violent in its unslacked state. *Limestone*, if powdered, or *chalk*, if spread on the soil would decompose vegetable matter found therein; so, also, will marl, and though its action might be slower than would caustic or unslacked lime, still its power would be exerted to a wholesome degree in the conversion of all such substances in a form to be taken up by the roots of the plants as nutriment.

In the *marl* and *green sand* which abounds in lower Virginia, the landholders of that delightful region have resources of improvement, which, if judiciously used, are calculated to restore to their arable lands a degree of fertility which will enable them to quadruple their present products. But he who *limes, marls, or applies green sand*, must introduce clover into his system of rotation.

Our memorandum for the management of flowers, in our last No. was prepared by another hand than that which had usually furnished it—hence, perhaps, the error in regard to the budding of roses. How the mistake was made, we cannot now determine. We have made an arrangement by which this department will be more in detail hereafter.

We have always endeavored to adapt our paper to the wants of every section of country, and shall be as happy to receive communications from our friends in Virginia, as elsewhere.

A portion of the marl received from the neighborhood of Mr. Ruffin's farm, has been placed in the hands of Dr. Higgins, our State Chemist, who will analyse the same, and present the result with that of other specimens found in this State.

Since the above was prepared, we have received the following note from T. M. B. Roy, Esq. of Va., with the samples of marl alluded to—that from Mr. Braxton's beds, is of the same qualtity as that heretofore received—the other sample is nearly a pure white, and was supposed by Dr. Higgins, who gave it casual examination, to contain 75 *to* 80 *per cent. of lime*. The great number of parcels which the Dr. has on hand to analyse, gathered during his sojourn in the lower counties of this State, prevents him from making an analysis of this sample at the present time.

To the Editor of the American Farmer:

SIR—Enclosed you will receive two samples of marl, one from Mr. Carter Braxton's beds and directly out of the one used by that distinguished agriculturist, E. Ruffin, Esq.—the other from my beds at Rongille, on the Rappahannock river which I have latterly sold, to be given up next January, at $ 30 per acre for the plantation, cash. I hope you will be pleased to receive these samples of marl as being, I think, the best in the country.

Yours, respectfully,

Sept. 15th, 1848. T. M. B. ROY.

P. S. Should it not be too much trouble, a number of your patrons would be pleased to see the analysis of the two descriptions of marl which are so highly valued.

THE HORSE—REMEDY FOR MEGRIMS.

To the Editor of the American Farmer:

Sir,—One of my best horses has recently been attacked by something like epilepsy. He does not fall nor have convulsions, but is seized with a shivering and trembling, lasting only two or three minutes, and followed by weakness and giddiness. He staggers about after an attack for a half hour or so, and does not recover his appetite for two or three days. These attacks usually come on after exercise either in the carriage or plough. He has had five of them during the spring and summer, and has, I think, become unsafe for the carriage. Can any of your correspondents suggest the proper mode of treatment? Yours, &c. P.

The *disease* with which our respected correspondent's horse has been afflicted is, we think, the *Megrims*, or, in other words, *apoplexy* in a mild form. *Youatt* thus describes the disease, its causes, symptoms, and treatment:

"*Megrims.*—There is another kind of pressure on the brain resulting from an unusual determination or flow of blood to it. This organ requires a large supply of blood to enable it to discharge its important functions. Nature, in the horse, more than in many other animals, has made some admirable provisions to cause this stream to flow into the brain with little velocity, and thereby to lessen the risk of suddenly overloading it or rupturing its vessels. The arteries pursue their course to the brain in a strangely winding and circuitous manner; and they enter the skull through bony apertures that will admit of the enlargement of the vessels only to a very limited extent. From various causes, however, of which the most common is violent exercise on a hot day, and the horse being *fat* and *full of blood*, more than the usual quantity is sent to the head; or from some *negligence about the harness—as collar being too small, or the curb-rein being too tight*—the blood is prevented from returning from the head. The larger vessels of the brain will then be too long and injuriously distended, and what is of more consequence, the small vessels that permeate the substance of the brain will be enlarged and the bulk of the brain increased, so that it will press upon the origins of the nerves, and produce, almost without warning, loss of power and consciousness.

The mildest affection of this kind is known by the name of *Megrims*. It comparatively rarely happens when the horse is *ridden;* but should he be *driven*, and perhaps rather *quickly*, he may perform a part of his journey with his usual cheerfulness and ease; he will then suddenly stop, shake his head, and exhibit evident giddiness and half consciousness. In a minute or two this will pass over, and he will go on again as if nothing had happened. Occasionally, however, the attack will be of a more serious nature. He will fall without the slightest warning, or suddenly run round once or twice, and then fall. He will either lie in a state of complete insensibility, or struggle with the utmost violence. In five or ten minutes he will begin gradually to come to himself; he will get up and proceed on his journey, yet somewhat dull, and evidently affected and exhausted by what had happened, although not seriously and permanently ill.

At the moment of the attack, a person who is competent to the task, should abstract three or four quarts of blood from the *neck vein;* or cut the bars of the palate, and whence a considerable and sufficient quantity of blood may be readily obtained.—The driver should pat and soothe the animal; loosen the curb-rein, if possible ease the collar, and pursue his journey as slowly as circumstances will permit. *When he gets home, a dose of physic* should be administered if the horse can be spared, the quantity of dry food lessened, and mashes given, or green meat,* or he should be turned out to grass for two or three months.

Is all this necessary because a horse has happened to have a fit of the *megrims?* Yes, and more, too, in the mind of the prudent man; for it is seldom that a horse has the megrims without the predisposition to a second attack remaining. These overdistended vessels may be relieved for a while; but it is long before they perfectly recover their former tone. It requires but a little increased velocity or force in the vital current once more to distend them, and to produce the same dangerous effects. The testimony of experience is uniform with regard to this; *and he would not do justice to himself or his family who trusted himself behind a horse that had a second attack of megrims.*

**Physic.*—Prepare the animal for the physic by giving him soft mashes until his dung is softened; then give him from 5 to 7 drachms of *Barbadoes aloes*, dissolved or mixed in a pint of warm water, and given in a drench. Repeat the dose in a few days, and continue the mash feeding for some days after the medicine has ceased to act. Keep hay in the rack for the horse to pick.

GROUND BONES.

To the Editor of the American Farmer.

At thy request, I will give thee a short history of the manner I prepare my bones for grinding. The largest quantity ground by me are collected from the streets and from the Hotels and Boarding houses of this city by poor children, to depots, from whence my wagons take them to the factory.

I purchase all the bone by the ton, of 2240 lbs.—on receiving them at the factory they are put into tubs holding about one ton each, and filled up with water—next morning steam from the engine is admitted by a copper pipe at the bottom of the tub, and they are kept in a boil for about 8 hours. The fat is then skimmed off and the water run off that evening. Next morning the bones are taken out of the tub and spread on a platform to dry for grinding.

I find the 2240 lbs. bone, after being boiled and dried as above, will not exceed 2000 lbs.; the average amount of fat taken off, will not exceed 80 lbs. leaving to every ton 160 lbs. of sand and dirt, which is of no use to the bone dust. The bone dust receives an additional advantage by the bones being boiled, that is, it destroys all noxious seeds from generating.

In New York, the process is carried on still further—when the bones are skimmed of the fat, sulphuric acid is added until the glue is extracted from the bones—the remainder are dried and ground very fine and sold for bone dust by the barrel.

I should suppose that the boiling of the bones as above will be to the advantage of the bone dust, because nothing of any value except the grease is lost—and it is better to lose it with the sand and dirt, than to retain the whole, provided we go no further—But to abstract the glue from the bone I should think injurious in the extreme, as far as the bone is intended for a fertilizer. Thine with respect,

THOS. BAYNES.

SHELL MOULD.

KENT COUNTY, Aug. 17th 1849.

To the Editor of the American Farmer.

In the month of November 1848, you published an analysis of oyster shell lime, made by Dr. Higgins, and you then stated in your remarks that you had used the shell mould, and considered it a valuable manure, but that you were best pleased with its action in compost, as it then yielded its virtues most promptly; and as I have a large quantity of that article on hand I wish to know in what manner to prepare a compost for manuring my corn crop next year, in the hill, with it; the whole tillage is already dressed over with shell lime. I have had an idea of preparing a compost of it for that purpose, of the following articles, viz: Bone-dust, Plaster and Salt, and what few ashes I shall have of my own saving, and I am anxious to know whether you think it advisable to do so, or not, or if you know of any ingredients that you think will answer better.

The manner in which the shell mould was formed into compost was as follows. Our guage as to quantity of manure for an acre was, 20 double-horse-cart-loads of barn-yard or stable manure, whichever kind we had on hand. Instead of using 20 loads of such manure we used 17, and mixed 3 loads of shell mould, incorporating the whole together very thoroughly, by turning it over twice with shovels. In the same field of corn we used this compost on one-half the field, and stable manure 20 horse cart loads per acre. Each half of the field yielded well. On reference to our farm book for "36," we find the following notes:

"1836 May 1. Finished manuring 12 acres in the millet field—one half with stable and barn-yard manure; the other half with 17 loads of same and 3 of shell mould formed into compost, thoroughly mixed by shovelling."

"1836 May 10. Finished planting corn in millet field."

"1836 Nov. 10. Results—each half of corn in millet field has produced well, estimated at 40 bushels to the acre—the part manured with the compost remained less affected by the drought of July than the other, remained greener throughout the season and produced more fodder."

The compost which our correspondent proposes to make of *Shell-mould*, *Bone-dust*, *Plaster*, *Salt* and *Ashes*, will in our humble opinion be one of the best applications he could make to his corn either in the hill or broadcast, and we have no doubt it will prove equally as efficacious as would Guano. In bones he will find nearly all the elements found in Guano. 3 loads of shell-mould, 4 bushels of bone dust, 1 bushel of plaster, 1 bushel of salt and 3 bushels of ashes, per acre, will be found ample, if he manures in the hill, and we have no doubt, should the season prove propitious, would ensure him a large crop of corn.

GUANO ON CORN, &c.

Will the editor of the American Farmer please answer the following queries:

1. Will it do to put guano in the hill with corn? and how much to make ground that now produces 4 barrels to the acre, double that quantity?

2. Will it burn up the corn like stable manure? and if it will, how to remedy that evil?

The same questions as relates to Chappell's Fertilizer.

Your compliance with the above request will much oblige me. Yours, truly,

R. H. RAMSEY.

ANSWERS BY THE EDITOR OF THE AMERICAN FARMER.

1. To the first and second questions we reply: It *will* "do to put guano in the hill with corn"—that one hundred pounds of guano, mixed with a load of mould and half a bushel of plaster, per acre, will increase the productive capacity of the land described to the standard indicated by the first question—that the *plaster*, by combining with the already formed ammonia in the guano, will form a sulphate of ammonia, which, not being volatile, will tend to prevent the injury of firing to the corn apprehended; while, at the same time, its nutritive properties will not be impaired, but will be gradually yielded up to supply the wants of the corn plants.

2. With regard to the operation of "*Chappell's Fertilizer*," we have no personal experience, and cannot, therefore, undertake to speak advisedly of its meliorating effects. Its virtues, however, are very highly sustained by the certificates of some gentlemen, in whose judgment we confide, who have used it; and, if those virtues are equal to the representations made of them, we presume that one barrel per acre, applied to corn in the hill, would produce the desired effect. As the ammonia in it is in a sulphate form, no fears need be apprehended of its burning the corn. It might possibly be worth much more than the cost to try both. Such experiment would test the relative value of each. We know the powers of guano, and have faith in the fertilizer, but, without personal knowledge, cannot get our consent to speak definitively upon the subject.

The Editor of the Philadelphia U. S. Gazette, thus notices the paper published in our July No., from the pen of Mr. Ruffin:

PROFITS OF FARMING.—The July number of the (Baltimore) *American Farmer* contains a highly interesting communication on the above named subject, from EDMUND RUFFIN, Esq., of Virginia, author of a well known and highly esteemed work on "Calcareous Manures," and one of the most distinguished practical farmers in the ancient Dominion. Successful in all his own efforts in the renovation of old exhausted lands, Mr. R.'s experience is the more authoritative, as well as interesting; and his account is a very encouraging one of the profit that may be actually realized in the intelligent pursuit of those rural occupations, which, in other respects, are known to yield such goodly returns of health, independence and happiness. Mr. Ruffin gives the results of his farming operations for five years, the profit and loss account of which is as follows: for the first year, there was a small loss of 27-100ths of 1 per cent; second year, a net profit of 8.16 per cent; third year, a profit of 12.18 per cent; fourth year, a profit of 22.86 per cent; fifth year, a profit of 20.10 per cent.—The average profit for the whole five years was nearly 13 per cent; for the last three years nearly 20 per cent; and all this exclusive of the enhanced value of the property from improvement of soil, &c. &c. We suppose it is not every farmer can do so well as this; but industry, intelligence and business habits and principal always command success in town or country.

AMERICAN FARMER.

BALTIMORE: SEPTEMBER 1, 1849.

TERMS OF THE AMERICAN FARMER.

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At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

OUR PRIZE ESSAYS.

The time for the reception of Essays, will expire on Saturday the 6th inst. We have received answers to our invitation to the gentlemen appointed to examine and decide upon the papers submitted, most of whom have accepted the same and will be here at the appointed time. We regret to add, that the competition for the prizes, has, so far, been very limited, though during the present week, many other writers may put in for the honors.

The offerings for the prizes of the State Society, it will be remembered, must be made by the day prior to the opening of the Fair.

"THE FARMER FUND."—The successful competitors for the prizes will be announced at the State Fair, and the plate presented at the time of the presentation of the prizes of the Society.—By request, the list will be kept open for the reception of donations to this fund, until the meeting of the State Society, when it is expected that some who will be here, will desire to subscribe their names.

TO THE CURATORS.—It is important that the Curators of the Md. State Agricultural Society, should meet at the Hall of the State Society, on THURSDAY EVENING, the 4th October, at 7½ o'clock. Business requiring their immediate attention renders it necessary that a full attendance should be had. Other officers of the Society, and such of the members of the Executive Committees of the city and several counties, as can make it convenient to attend, are also requested to be present.

THE EXECUTIVE COMMITTEES of the Md. State Agricultural Society, appointed for the several counties and the city of Baltimore, last year, are respectfully requested to act in the same capacity for the present. They will take the names of gentlemen wishing to become members of the State Society, receiving their fees, and give receipts therefor. Such receipts will be handed in at the meeting of the State Society, or at the Fair, and BADGES given therefor, which will be the evidence of membership, to the gate keepers, for the admission of members and the females of their family.

ANALYSES OF LIME, &c.—We have received from Dr. HIGGINS, State Chemist, an interesting paper, containing the analyses of a number of kinds of lime, with accompanying remarks. We are reluctantly compelled to defer it until our next, when we hope to accompany it with the additional facts which the Dr. promises in a subsequent paper.

☞The paper from the pen of Dr. Morton, of Va. which we have the pleasure of presenting in this No. of the Farmer, will be read with deep interest. The subject on which he treats, is of a character which comes home to the bosom of every landholder and philanthropist.

☞The article from T. S. P., on the subject of guano, will be found of much interest.

Maryland State Agricultural Fair.

THE PLACE SELECTED
FOR THE
CATTLE SHOW,
AND
AGRICULTURAL AND HORTICULTURAL
EXHIBITION,

To take place on Wednesday, Thursday and Friday, the 10th, 11th and 12th of October, inst.,

HAS BEEN LOCATED IN

CARROLL'S WOODS,

Near the Outer Depot of the Baltimore and Ohio Rail Road, immediately opposite the Locust Point Switch, and directly in the rear of the Cattle Scales.

☞As the place has been changed from that of Last Fall's Exhibition, Visitors and Exhibitors are requested to take particular notice of the fact. It is a beautiful site for the purpose; for the use of which the Society is indebted to the liberality of CHAS. R. CARROLL, Esq. Under the direction of the officers of the Society, the grounds have been laid off, and the enclosures and buildings necessary for the purposes of the Exhibition are being erected by Mr. Isaac Bull and assistants. Visitors can approach the grounds either from the Rail Road, or from the Frederick turnpike. The entrance gate for the Visitors will be on the east side—that for Stock on the north.

THE MEETING OF THE STATE SOCIETY, will take place on TUESDAY EVENING, the 9th inst., at 7½ o'clock, at the Society's Rooms, 128 Baltimore street. As many arrangements will necessarily have to be completed prior to the opening of the Exhibition, it is earnestly hoped that every member who can be in the city, will be present at this meeting. The *Standing Committees*, a list of which will be found with the Premium lists, are expected to report at this meeting. As also Committees who may have been appointed for special purposes.

The Judges appointed to award the premiums at the Exhibition, are especially requested to be at this meeting, or signify the acceptance of the appointment, in order that any vacancies which shall occur, may be filled in time. The Judges, as well as Exhibitors, are particularly referred to the Instructions and Resolutions contained in the Supplement to the American Farmer for July—which has been forwarded to the gentlemen appointed—copies of which can also be had at the Society's Rooms.

The following are the names of the Judges appointed for the Exhibition.

On Cattle.—Neat Cattle over 3 years old.—Dr. J. W. Thompson, Geo. E. Brooke, Gen. Rust, Wm. H. Jones and J. Wilkinson. Neat Cattle between 2 and 3 years.—Col. J. Ware, Col. E. Lloyd, Dennis Kelly, C. Holcomb, P. H. Small. Neat Cattle under 2 years.—Willoughby Newton, Philip Reybold, George Blight, Jas. Goldsborough, Benedict J. Heard.

On Horses.—Col. C. Carroll, J. N. Bonaparte, S. O. Hoffman, Wm. B. Paca and Geo. Forbes.

On Working Oxen.—William T. Goldsborough, Wm. Jessup, A. Clement, Mr. Thurlock of Del., L. Bayley of Va.

On Fat Cattle and Sheep.—Thos. A. Emory, Harry Carroll, Samuel S. Earle, J. M. Turner and Sterling Thomas.

On Sheep.—William D. Bowie, A. B. Allen of New York, James B. Gray of Virginia, Dr. Walter Turpin of Queen Anne's Co., Bryan Jackson of Delaware.

On Swine.—C. N. Bement of New York, Edward T. Paca, Dr. C. M. Jones, Edward Gorsuch and James C. Atlee.

On Poultry.—William C. Wilson, R. Tilghman Goldsborough, Wm. Gilmor, Col. S. Hillen, Thos. E. Stewart.

Agricultural Implements.—Class No. 1.—Ploughs, Harrows, Cultivators and Rollers.—Col. N. Goldsborough, Col. Wm. Coad, Rev. Mr. Asquith, Col. J. Tilghman and John C. Clarke of Del.

Class No. 2.—Henry S. Ellsworth, Edmund Ruffin, Edward Tilghman, John Kibler, C. Wright.

Drills and Broadcasting Machines, Wheat and Grass Cutters of all descriptions; Wheat or Grass Rakes, by horse power; Cradles, Carts, Wagons, Wagon Gear, Cart Gear, Ox Yokes and Ox Gear.

Class No. 3.—M. T. Goldsborough, Dr. Jos. F. Shaw, T. A. Spence, Robert Gilmor, L. W. Washington.

Horse Powers, and all Machines propelled by horse power, not enumerated above; Corn Shellers, Corn and Cob Crushers, by hand power; Straw Cutters, Corn Stalk Cutters, and Grinders by hand power.

Class No. 4.—Gen. T. Tilghman, Wm. F. Johnson, James L. Martin, Chapman Billingsley, Sam'l Stone.

All Implements or Machines not enumerated above.

Persons presenting Agricultural Implements, or articles of mechanical ingenuity and utility, are requested to furnish the Secretary with a particular description of the article, and the price and place where it can be obtained, as it is intended to publish a list of the articles exhibited at the Fair for the benefit of the manufacturer and purchasers.

Agricultural Productions—John S. Sellman, J. R. Emory, John Jones of Del., Wm. Thompson, John W. Martin.

Dairy and Honey.—Richard Thomas, C. P. Craig, Z. Barnum, H. F. Jackson, Wm. Guy.

On Fruit.—Dr. John H. Bayne, Gen. Richardson of Va., Judge Goldsborough, Judge Brewer, Edward J. Stevens.

On Vegetables.—David Kerr, Henry Troup, Col. Walton, T. R. Holliday, Wm. R. Barker.

On Flowers.—Edw. Kurtz, Dr. Gideon B. Smith, Robert Buist, Joshua Pearce, John Douglas.

Household Manufactures.—A Committe of five Ladies to be selected from those attending the Exhibition.

Bacon Hams.—J. G. Davies, H. Jenkins, K. R. Owen, Bennet Gough, John D. Bowling.

Ploughing Match.—Edward Stabler, Wm. B. Willis, Basil D. Hall, Edward Plowden, Thomas R. Brown.

On Essays.—Edward P. Roberts, F. P. Blair, Richard Earle, J. T. Stoddart, Robert H. Hare, Jr., of Howard District.

For the best Essay on the comparative advantages of drill husbandry over the old system, $20 00

To be accompanied with a detailed statement of the saving in labor, seed, &c;, and also the difference of product, and a statement of such experiments in various crops, as may have come to the knowledge of the writer.

For the best Essay on the comparative value of different manures, founded upon actual experiments, $20 00

For the best method of keeping Farm accounts, 20 00

The Essays to be handed in by the 9th October.

Premium Animals.—Dr. J. W. Thompson, Col. J. Ware, Willoughby Newton.

For the best Bull of any breed, which has previously taken a first premium of the Society, $10 00

For the best Cow of any breed, which has previously taken a first premium of the Society, 10 00

Committee on Reception of Strangers.—Head Quarters at the Society's Rooms, in the City, and during the Exhibition, at the Office on the ground.—Sam'l Sands, J. C. Walsh, and Dr. John O. Wharton.

THE PLOUGHING MATCH

Will take place in a Field adjacent to the place of Exhibition, at 10 o'clock on *Thursday*, the 11th, (the second day of the Fair.)

THE ADDRESS.

The Annual Address will be delivered at 12 o'clock, on *Friday, the 12th of October*, and immediately after the Address, the Reports of the Viewing Committees and Judges, will be ready, and the Premiums awarded and distributed.

☞ ALL EXHIBITORS FOR PREMIUMS MUST BE MEMBERS OF THE SOCIETY, ☜ and have their Articles ENTERED AT THE BUSINESS OFFICE, before taking them into the enclosure. The Articles must be on the ground on *Tuesday*, the day before the Fair, so that they may be arranged and in readiness for examination by the Judges on *Wednesday Morning*. Persons disregarding this arrangement may not be in time for competition. No Animals or Articles entered for Exhibition will be allowed to be removed from the grounds, except by permission of the President, until the close of the Fair.

All persons who intend to exhibit Horses, Cattle, Sheep or Swine, or who intend to offer Stock for sale, should notify the Secretary, *Samuel Sands*, of such intention, before the day of Exhibition, and leave with him a list and full description of such stock, in order that proper arrangements may be made for their accommodation.

Applicants for premiums are particularly requested to pay attention to the directions attached to the list of premiums for Fat Cattle, Fat Sheep, Butter and Cheese, Field Crops, &c., and the statements required from Exhibitors of those articles must be lodged with the Secretary, Samuel Sands. A failure in attention to this rule may defeat the applicant's success.

Hay and Straw will be furnished gratis for all animals entered for premiums, and grain will be provided, at lowest cost price, for those who desire to purchase.

THE BUILDING IN THE CENTRE OF THE GROUNDS is appropriated for the reception of Fruits, Flowers, Vegetables, Household Manufactures, and the productions of the Dairy. A Committee will be in attendance for the reception of all articles in these departments.

☞ ALL MEMBERS OF THE SOCIETY, and all who may become members at the time of the Fair, by the payment of $3, will be furnished with BADGES, which will admit the person and the female portion of their families to the Exhibition during the Fair.

PREMIUMS FOR CROPS.—Competitors for Crops, except for Wheat and Sweet Potatoes, will be required to make their entries before the Show closes, and the awards will be made at the meeting of the Society in February next.

PASSAGE AND TRANSPORTATION TO THE CATTLE SHOW.—The President of the Maryland State Agricultural Society, addressed a copy of the following note to each of the presiding officers of the several Rail Road and Steamboat Companies of our city:

BALTIMORE, Sept. 6, 1849.

Sir—I address you in behalf of the Maryland State Agricultural Society, to ascertain whether the Company over which you preside will grant our Society, at its Angual Exhibition in October, the same accommodations and facilities which are afforded to similar Associations at the North. Will the Company convey all stock, machinery and other articles intended for the Exhibition free of charge, and grant round trip tickets, at a reduced price to such persons as desire to be present at the Fair? It is confidently believed that such an arrangement would benefit the Company in a pecuniary point of view, and at the same time foster the interests of a class which contributes more than any other to the revenues of the Company. Be pleased to give me as early an answer as convenient, and oblige

Your obedient servant,
CHAS. B. CALVERT,
Pres. Md. St. Ag. Soc.

The Presidents of the Principal Lines promptly responded thereto, as follows:

Mr. *Magraw*, President of the Baltimore and Susquehanna Rail Road Company, informed the President that the stock, &c. would be carried free, and that the subject of round trip tickets would be laid before the Board; and no doubt the arrangement will be completed.

Mr. *Swan*, of the Baltimore and Ohio Rail Road Company, assented to the carriage of stock, &c., free, and referred the subject of round trip tickets to the General Superintendent, who would consult with the President of the Society, and make suitable arrangements therefor.

Mr. *Campbell*, Secretary of the Philadelphia, Wilmington and Baltimore Rail Road Company, says, that he is directed by the President to state that tickets for the round trip will be furnished at the established rates for Conventions, &c., viz; $4, through, or two cents per mile each way, for way stations within the state of Maryland, that is to say, all points between Elkton and Baltimore. Also, that all implements, machinery, stock, &c. will be transported free, provided two days notice is given before they are to be forwarded. Animals to be received at Gray's Ferry, Philadelphia, and at the President street Depot, Baltimore, and at the regular intermediate Depots. All articles to be at the risk of the owners.

Mr. *M. N. Falls*, President of the Baltimore Steam Packet Company, (Norfolk Line,) will permit stock, &c., to be forwarded free, and will also reduce the rate of fare to those attending the Fair.

Mr. *Jas. Boath*, President of the Citizen's Line Steamboats to Philadelphia, says that there are not suitable means for transportation of Cattle on the Line, but that implements and machinery will be forwarded free, from New Castle and Frenchtown, if delivered a few hours before the time of transportation at either of those places, and that round trip tickets will be furnished at $4 from Philadelphia, $3 from New Castle, and $2 from Frenchtown.

Capt. *Weems*, of the steamers, Planter and Patuxent, will transport stock, &c., free, and will also make accommodating arrangements in regard to passengers.

These liberal arrangements on the part of these Companies, deserve, and will no doubt receive, the thanks of the Society and of the agricultural community.

CONVEYANCES FROM THE CITY TO THE CATTLE SHOW.—The Baltimore and Ohio Rail Road Company will run a Train of Cars, every hour, from the Pratt street Depot, to Carroll's Woods. Fare 12½ cents. Omnibusses will also be placed on the Line at same rate.

INVITATIONS TO THE FAIR.—A committee comprising the President, First Vice-President, and Corresponding Secretary of the Maryland State Agricultural Society, was appointed at a late meeting of the Board of Managers, to invite the attendance at our Cattle Show, of the President of the United States, the Heads of Departments, the Governors of our own and other States, and other eminent public men, and distinguished friends of agriculture. Letters have been received, accepting the invitation, from a number of them, which will be laid before the Society at its meeting on the 9th inst. The following, from the President, gives us good reason to expect that he will be with us on the occasion, as his health has much improved since the date of his note.

WASHINGTON, D. C., September 15, 1849.

GENTLEMEN—I have received your communication of August 27th, inviting me to attend the Annual Fair of the State Agricultural Society, to be held in Baltimore on the 10th, 11th and 12th of October next. It is quite doubtful whether the state of my health will permit my acceptance of your invitation, but if I shall be sufficiently recovered to attend, and can be absent from the Seat of Government at that time, I shall certainly be present at the Fair. I am, gentlemen,

With respect, your ob't serv't,
Z. TAYLOR.

Charles B. Calvert, and others,
Com. of Invitation, Baltimore, Md.

A TEXT BOOK OF GEOMETRICAL DRAWING—by *Wm. Minifie*, Architect, and Teacher of Drawing in the Central High School of Baltimore.—We have had a copy of this work placed on our table by the author and publisher—it is intended for the use of schools, and, from the notices we have seen of it, from competent judges, we have good reason to believe that it is a work of much merit. We have known the author for years, as the teacher of drawing in our high school, in this city; and we have no doubt it will be found a valuable auxiliary not only to our schools and academies, but also to every machinist, carpenter, engineer, millwright, and all others engaged in scientific pursuits.

EDITORIAL ITEMS.

NOTTAWAY Co., VA.—We are in expectation of receiving some essays from a competent hand, on the subject of the improvement of farming in this county and neighborhood, in accordance with the request of Mr. Irby. We have solicited the same from a gentleman well qualified, and have received the assurance that they will be prepared.

MR. NEWTON'S FARMING.—We have the assurance from the Hon. Willoughby Newton, that we shall receive the promised communication from him on the subject of the improvement of his lands, in time for our next No. His other engagements have prevented him from complying with our request to furnish it for this month's paper.

GUANO FOR MELONS.—We have received from a correspondent, a communication on the subject of the use of Guano for melons, &c., which will appear in our next.

THE DROUGHT.—The complaint is almost universal, of the great drought which has prevailed during the summer. A letter from a correspondent in Kent Co., says:

"Our crops here are the worst I have known for 12 years—the drought lasted all the summer and began early in May. I think it will break up some of the small farmers on poor soils, and indeed, I know some who are already seeking employment as overseers."

In Montgomery, while on a recent visit, we learnt that vegetation of every description was suffering; the corn looked very bad indeed, and the pastures appeared parched up.

CURING BACON.—The following is the recipe of Mr. Thos. Bowie, of Montgomery Co. as presented with a ham at the late Fair at Rockville:

1 lb. Saltpetre—1 lb. Saleratus—¼ lb. Cayenne. Mixed together and rubbed on the fleshy parts of shoulders and hams of 100 lbs pork before salting. *Salting*—Equal quantities of coarse and fine salt, put on sufficiently to cover the fleshy parts. Remain in 6 weeks and smoke with wood.

FREDERICK Co. MD.—One of the most observant farmers in this county, writes us as follows:

"The failure of the corn will be very great, so also of potatoes,—I should suppose the Tobacco failure is almost total, they speak of a tenth of a crop. This will be a sore year on the farming and planters funds."

AGRICULTURAL CHEMISTRY.—Dr. *Higgins*, the State Chemist, paid us a visit during the past month. He is now operating in Cecil county, and will next proceed to Somerset, when he will have completed his labors for that shore, as far as he could accomplish the object of the law creating his appointment, which is very defective. There is much anxiety for his appearance among the farmers in the counties on the Western Shore. The Worcester Shield, in speaking of the labors of Dr. H. says, that during the seven weeks he was in that county, he was constantly employed in analyzing many varieties of soil, and that his lectures had been listened to with great attention by the agriculturists of that county.

We learn, that a large class in Chemistry has been formed at the opening of the present session in St. John's College, Annapolis; and, the Rev. Dr. Humphreys will receive samples of soils to be analyzed, and may be consulted in regard to them, at the Laboratory, from 4 to 5 o'clock, P. M., every week day except Saturday.

THE WHITE BLUE STEM WHEAT.—Mr. Burgwynn, the reception of whose sample of this variety of wheat we noticed recently, and which has been so much admired by the visitors to our Rooms, has premised to leave us a bag of it as a sample since he has finished threshing. Mr. B. informs us that he is sending it to his agents at Petersburg, Va., Patterson, Cooper & Co., who hold the best of it as seed wheat, at $1.25 per bushel, at which price he expects to sell about 2,500—a neighbor of his to whom he gave last fall a bushel of the seed, said it produced 22 bushels of clean good seed, the same result which attended Mr. B's. seeding of 29 bushels the fall previous.

PRINCE GEORGE'S Co. 9th ANNUAL AGRICULTURAL FAIR, takes place at Upper Marlborough on the 24th and 25th of October. The usual liberal list of prizes is offered by the Society, and we notice that volumes of our journal are to be awarded to successful competitors, in a number of cases.

☞The CHARLES COUNTY Exhibition takes place Oct. 30 and Nov. 1, at Port Tobacco. We should be highly gratified to accept of the urgent invitation of our friend, Gen. *Chapman*, President of the Society, to be present on the occasion, and if our arrangements can be made to accomplish it, we will embrace the opportunity of visiting that section of our State. We learn that the spirit of improvement is abroad there, as well as elsewhere, and that the evidences of an awakened zeal in behalf of Agriculture will be fully evinced at the approaching Fair. The President assures us that the latch string of the hospitable doors of the people of Charles will be found outside, and good cheer and a kind reception will await all who may visit them—of this we have no doubt. The beauty and worth of Charles, are promised to be in attendance, and our gallant friend, knowing our tender points, has held out this as an additional inducement for us to meet him at Port Tobacco.

The PHILADELPHIA Society for promoting Agriculture, hold their Annual Exhibition at the Lamb Tavern, on the Lancaster turnpike road, 1 mile west of the Schuylkill, on the 4th and 5th October. The list of premiums is very extensive and liberal.

The DELAWARE State and NEW CASTLE Co. Societies hold a joint exhibition at the town of New Castle, Del., on the 17th of October. This will be an uncommonly interesting exhibition—and those from a distance who attend our State Fair, would do well to embrace the opportunity of being present also at the Philadelphia and Delaware Exhibitions.

☞A correspondent in King George county, Va., has forwarded us a communication in reply to the enquiry of our Charles county, Md. correspondent, in the September No. It was received too late for this month, but it will be published at as early a day as practicable.

NEW YORK STATE FAIR—THE MD. STATE FAIR —AND THE FAIR OF THE MECHANICS INSTITUTE.—The great Fair held at Syracuse last month, for the exhibition of domestic productions, was most numerously attended. Persons were present from every county in the State, and a great many from other States. It is estimated that 50,000 persons were in attendance each day. A number of gentlemen were present from Maryland—and from the representations made to us, we are free to promise that the MARYLAND STATE FAIR, to be held this month, will excel any other of the season, taking all the branches into consideration. There was a large display at Syracuse of Domestic Manufactures, and other articles not properly coming within the usual sphere of an Agricultural Exhibition; and although these will not be found at our Show Grounds to the same extent as are exhibited at the Eastern Fairs, yet we can promise that our Mechanics will make a display at their Annual Festival, which will be in operation at Washington Hall, in this city, at the same time that our Cattle Show is being held, which will be of the most intense interest, and we would earnestly call upon our friends to fail not in attending the same whilst here.

DONATION.—*H. G. S. Key*, Esq. of St. Mary's Co. has presented to the library of the State Society a quarto volume of some thousand pages entitled "The complete Farmer, or a general Dictionary of Husbandry in all its branches," published in London in 1769. It contains numerous engravings of insects, plants, implements, &c. and is a work that might be read and studied with interest and profit, even in this age of progression.

☞ "ENGLISH FARMER," is received. The enjoyment to which he objects is so interwoven with the habits of our people, that the present generation will have to pass away before it will be surrendered. The "good time," however, will "some day come," as he intimates.

The Richmond (Va.) Planter, in noticing the preparations for our Fair, remarks:

"In the absence of any such society in Virginia, many of our farmers have attached themselves to that in Maryland. We have seen some fine cattle (for breeding) which will be transported thither from this vicinity. *The old Dominion will be there with some of her worthiest men and best stock.*"

We have numerous letters from Virginia and also from other States, which induce the expectation that an immense gathering will be here of farmers from a distance; and although the Show takes place at a time very inconvenient for many to attend from our own State, yet there will be few of the farmers of Maryland who will not strain a point to be here —It is to be the GREAT FAIR of the season.

PREMIUMS FOR WHEAT.—We noticed some time since, that Messrs. Coleman and Hinton & Co. of Augusta, Geo. had offered very handsome premiums to the farmers trading with their city, for the best four loads of Wheat, of fifty bushels each. The result was as follows:

To Mr. G. FLANEGAN of Columbia county for the best specimen of fifty bushels (62 lbs. per bushel) Little White Wheat, 1st premium, $100.

To Col. John Bonner, of Hancock county for second best specimen of fifty bushels (63 lbs. per bushel) Red Wheat 2d premium, $75.

To Col. F. W. Pickens, of Edgefield District, S. C., for the third best specimen of fifty bushels (61 lbs. per bushel) Bearded Wheat, 3d premium, $50.

To Mr. Peter Knox, of Columbia county, for the fourth best specimen of fifty bushels (61 lbs. per bushel) Little White Wheat, 4th premium, $25.

The following awards were also made at the State Fair:

Mr. E. A. Davis, of DeKalb Co., exhibited 2½ bushels of Red-Flint Wheat, which weighed 66 lbs. 15 oz. per Bushel. 1st premium, $5.

Mr John Farrer of Putnam, exhibited 2½ bushels of White Wheat, grown by Mr. Height, Jr. weighing 61 lbs. 2d premium, $3.

Mr. John Farrer, of Putnum, exhibited 2½ bushels of Red Wheat, grown by himself, weighing 63 lbs. per bushel, 3d premium, $3.

The GEORGIA STATE FAIR took place on the 15th July last. We learn from the Macon Journal, that the number of articles was just twice the amount exhibited last year, and the receipts nearly two thirds more.—Among other proceedings of the Society, we find the adoption of the following resolutions:

Resolved, That a committee of three be appointed by the President, to draft a memorial and present it to the next Legislature, asking an appropriation of $10,000 to aid this association in offering suitable premiums at its next annual meeting, and to promote the general agricultural interests of the country.

Resolved, That this association do memorialize the next Legislature, to pass suitable laws for the protection and encouragement of Sheep Husbandry in this State, and that a committee of three be appointed to prepare said memorial.

Resolved, further, That each County Society in this State, be requested to co-operate with this Association in the above object, by sending similar memorials to the Legislature.

The committee on Conserves, Confections, &c. speak in the highest terms of the Preserves, Sweetmeats, &c. presented, among which was water melon rind preserves, for which the following recipe is given:

WATER MELON RIND PRESERVES.—When the rind becomes a little transparent in the brine, put it into the fresh water for a day and night, changing the water several times; then boil it for one hour, very fast, in fresh water, cover with grape leaves to green them. Take them up; and drop in cold water enough to cool them quickly; then weigh, and to each pound of rind add two pounds of sugar, and boil it rapidly, with a few pieces of ginger. When done, they are very transparent; add, when cold, a few drops of essence of lemon.

ARROW ROOT.—An article of Sago prepared from the Arrow Root, by Mrs. S. A. Rees, of Sumter, came under the observation of the Committee, and in character they say, was not surpassed by any that may be found in our Southern market, and yet an article scarcely known out of the sick room of the wealthy. (The mode of cultivation and preparation, is appended.) Premium, silver cup, worth $5.

"To grow Arrow Root successfully, you must

first prepare your ground thoroughly; if not already rich, you must make it so. Then break very deep and pulverize finely; lay rows three feet apart, and about three inches deep; then plant the seed by laying them lengthwise in the furrow, the ends nearly touching; cover them without ridging, and cultivate them closely and neatly, until about frost. A light frost will do it no injury, but a heavy one will give it a yellow tinge, unless dug and prepared immediately, which would be impossible, if a large crop was on hand; so that it is best to avoid the risk, as the loss in the growth would not be so great as the injury it might sustain from a freeze. After you have prepared your trough and pestles of oak, as for beating apples for cider, on a small scale, (recollect those arrangements are only for family use) with large earthen or china bowls or tubs, for washing the pulp, then dig your roots carefully, without breaking shucks, and wash clean in more waters than one, if necessary, as the utmost neatness is required to make it fine; then pound in your trough, until you have crushed every particle into a pulp; then throw into your earthen or china vessels of clear water; then wash out, and squeeze from all the fibre which you may reject; then strain the remainder through two folds of fine muslin, and that portion left in the muslin may be again beat with fresh root. The strained liquid must be set apart to settle, two or more hours, or until the water can be poured off, without disturbing the deposite at bottom; pour on again a second supply of water, and stir well, and settle again, as before; and so on, until the water comes off perfectly clear. Then spread your beautiful, spotless preparation thinly upon the cloth, in the sun to dry. About three waters is generally sufficient."

IMPORTATION OF FINE STOCK.

We had the opportunity presented us, on the 17th ult. of viewing the stock noticed in the accompanying letter from Mr. Etches. The cow herd, in whose charge they were placed, had faithfully performed his duty, and the animals appeared in nearly as good order, as if they were just off their usual pastures. They had reached this city but a few days before we saw them, and are among the finest specimens of their respective breeds. They consist of a young AYRSHIRE Bull, and two heifers, between 2 and 3 years old, and two Cows; beside the sheep and pigs mentioned by Mr. Etches. The bull and heifers are beautiful specimens of that valued milking breed of cattle—the heads of the heifers and all their limbs, were as clean and as finely formed as those of the deer, and gave evidence in the appearance of their udders, of being deep milkers. The cows too, were admirable samples of this breed. The sheep are most perfectly formed animals, and are of the purest stock of England. The cattle was selected as the very finest specimens to be had in Scotland, and the well known judgment of Mr. Etches in such matters, is a guarantee that the purest blood, the finest forms, and the best milking stock has been secured for his friend Shepherd. In our journal for June 10th, 1849, (old series) we published a catalogue of Durham Short Horns, Leicester Sheep, and Suffolk Hogs, selected by the same gentleman for Mr. Shepherd. The improvement of the breed of cattle in the valley of Virginia, in which they were introduced, with other importations of a similar character, is made manifest in the great increase in the size and proportions of the beef cattle daily brought to our market. The object of Mr. Shepherd, in this importation, is to test the relative value of the Ayrshires for the dairy, and to rear a flock of the prime Southdowns, now so universally admitted as the most favored breed for the palate of the epicure. The enterprise and public spirit of Mr. Shepherd is worthy of all praise and of imitation—and he is entitled to the thanks of the whole farming community, for the numerous instances of his zeal for the improvement of our domestic animals. We hope that it will be consistent with the convenience of Mr. Shepherd to favor our coming Exhibition with a show of these animals—we are aware it is asking much, considering the immense cost and risk which he has been at—but still there will be thousands and tens of thousands of his fellow-citizens from his own and other States present on the occasion, who would be highly delighted at their exhibition.

HAVERLY THORN, STONE, STAFFORDSHIRE, (Eng.)
August 3d, 1849.

MR. W. G. HARRISON—Dear Sir: I beg to advise you of having shipped on board the Henry Pratt, of New York, for R. D. Shepherd, Esq., of New Orleans, four prime Ayrshire cows, one bull of same breed, six Southdown ewes, one ram of the same breed, and two Worcestershire pigs, male and female, of my own breed. The sheep are selected from the celebrated flock of pure Southdowns bred by Lord Atherton, of Tedesley, in this county, and they descended from the flocks of the Duke of Richmond and Jonas Webb, Esq., who have been so fortunate in carrying away the prizes, many years together, from the Royal Agricultural Society of England, held at Cambridge, Bristol, Derby, Newcastle upon Tyne, Northampton, York and Norwich, in July the present year. Better blood cannot be obtained.

The Ayrshire cows and bulls, celebrated for their superior milking qualties, I have selected from the best herds bred in that country—are pure bred, fine animals, and very promising to show their superior milking when in America, as well as England, if properly attended to. They are to be sent to his estate in Virginia. No doubt you have had his instructions some time ago. A bill of lading has been sent to you from Brown, Shipley & Co., of Liverpool. I saw them safe on board, and properly supplied with provisions for sixty days, in case they should have a long passage. Freight, 42 pounds. One of my own men is in charge of them. He is gone to seek employment. I have given him a character; he is a good farm servant—understands the management of cows. Wishing them a safe voyage,

I am, sir, your obedient servant,

J. C. ETCHES.

THE FOURTH ANNUAL EXHIBITION OF THE MONTGOMERY COUNTY AGRICULTURAL SOCIETY.

By invitation from *A. B. Davis, Esq.*, President of the Society, we had the pleasure of partaking of the rural festival of the farmers of Montgomery county. It is the first time we have had the opportunity of attending one of their Cattle Shows although we had, some years before, the pleasure of visiting the county. Perhaps, in no part of our State are such rapid strides being made in the improvement of the soil, as in Montgomery—this will be made manifest by the statement of the fact, that there has been introduced, during the present year, guano to the amount of 750 to 800 tons, besides a large amount of bone-dust, agricultural salts, and other fertilizers, purchased from abroad, and independent of the immense amount of bones and lime furnished at home—$40,000, at least, according to the calculation of the worthy President of the Society, has been expended out of the county in this manner. All classes of the community seem to be alive to the importance of the subject of the renovation of their waste lands, and, notwithstanding much has been accomplished during the last few years, yet truly, we had the opportunity of witnessing, in our travel through the county, that much remains to be done—but with the indomitable energy which her sons have evinced, the period is not very distant when her waste fields *will be* reclaimed, and Montgomery placed in the very front rank of our agricultural districts. Some idea may be formed of the improvement which has already been

accomplished, from the tabular statement of one of our correspondents in the present number of our journal—and what has been done in the particular locality alluded to, can be done in every other land in other sections is not more thoroughly exhausted of its fertility than was that to which allusion is made—and it has been found that it is susceptible of a high state of improvement.

But to the Exhibition. We had taken copious notes of what we saw and heard, but a press of matter on our pages already prepared, and indisposition since our return, have precluded our saying as much as we desired in regard to the show. By the untiring exertions of the excellent President of the Society, the Exhibition was in a high degree creditable to the county. The display of fine oxen and horses, would be hard to beat any where—we were, indeed, astonished to see such an Exhibition in these departments. There were, also, a number of very fine cattle of the Devon and Durham, and cross-breeds. The only mules on the ground were the fine team of the Triadelphia Factory, which were so much admired at our last State Fair. The display of sheep and hogs was very limited, as was that of agricultural implements and machinery—much disappointment was felt at the non-attendance of some of the manufacturers of implements from the neighboring cities, who were confidently expected. Our young friends, Maxfield, Mott & Co. were the largest exhibitors, and received the prize therefor—it was their first appearance on that stage, and from the cordial manner in which they were received, we have little doubt they will be induced to follow up the good impression they have just made, by a still more extensive exhibition at the next Fair.—Regret was also felt at the non-appearance of the fine stock from the Laurel, which it had been announced would be on the ground, but, as we subsequently learned, was detained in consequence of the owner's urgent business requiring his presence elsewhere at the time of the Exhibition. The ladies made a most beautiful display in the department of household economy. The space allotted for their handiwork was continually crowded, and gave universal satisfaction. A number of the articles were of peculiar merit, and we were promised that they should be on exhibition at the State Fair.

There was a larger attendance of visitors at this Exhibition than any that had preceded it; and the fair daughters of Montgomery, and some from other counties, and the city of Washington, graced it with their presence in large numbers, and added much to tae interest of the Fair. Seats were provided in front of the stand appropriated for the Orator of the Day, and the scene which was presented, in the radiance of beauty which was there exhibited, was calculated to make a pleasing impression upon the stranger. Our own city is famous for its lovely women; and our friend, Gen. Chapman, (who was called upon by the President to deliver the prizes to the ladies as they were awarded, and which duty he performed in the most graceful and gallant style,) promised us, if we would visit his County Fair, that we should behold the loveliness of Charles in attendance—yet we are doubtful if either there, or at our State Show, a more beautiful array can be presented than was furnished at Rockville.

In the Speaker's stand, for the delivery of the Address, were seated, by invitation of the President, a number of gentlemen from other sections, among them, the Hon. Geo. C. Washington, Hon. Richard Thomas, of St. Mary's, Gen. Chapman of Charles, and T. F. Bowie, Esq. of Prince George's. Also, Maj. Geo. Peter and F. P. Blair, Esq. of Montgomery. The Stand was beautifully ornamented with choice flowers and evergreens, and the Address of the Hon. Mr. *Whittlesey*, was listened to with the most marked attention—a copy of it was requested, by the Society, with a vote of thanks, and we shall have occasion hereafter, to make copious extracts from it. The President of the Society, before introducing the Orator of the Day to the assembled multitude, read a letter from the President of the United States, acknowledging the receipt of an invitation, and regretted his inability to attend the Fair—also from the Secretary of State, the Hon. Mr. Clayton, who had been invited to deliver the Annual Address, in which he regretted his inability to comply, in consequence of pressing engagements.

In the evening, a meeting was held in the Courthouse, in Rockville, where it had been announced that Professor Emmons, who is now a resident of Montgomery, would address the Society, but in consequence of indisposition, he was unable to attend. The President of the Society, *A. B. Davis*, Esq., addressed the Society, and presented many facts in regard to the progress of improvement in agriculture generally, and particularly in that county; which were listened to with the the most intense interest. A considerable portion of his address was devoted to the subject of manures, the *supply*, and the means of obtaining it—and he alluded to the correspondence which had taken place between him and the Rail Road Co., relative to the freight charged thereupon. A copy of his letter had been furnished to us, and will be found in this No! of the Farmer. After stating the ill-success which had heretofore attended his application, as the organ of the Society, in obtaining a modification of these onerous charges imposed upon the farmer, he said:

"A new ray of hope, however, has sprung up. A gentleman from the north, of great experience, skill and enterprise, has been made chief superintendent of this road. Learning from various sources that he had, in a very short space of time, introduced several salutary reforms, and that his recommendations were heeded by the Board, I determined to address him, and call his attention to my former communication to the Board on this subject. Shortly after doing so, and being in Baltimore, I called to see him in person, and was much gratified at the favorable views he appeared at once to take of the subject. Since then I have received from him such evidences as to leave no doubt upon my mind of his intention to bring the whole subject before the Board, and memorials have been forwarded to Baltimore to aid him in his efforts."

Mr. Davis announced his desire to retire from the office of President, but the Society unanimously tendered him its thanks, for his efficient services, and begged that he would reconsider his determination. We hope he will do so, as we fear it would be difficult to supply his place. We had frequent opportunities of witnessing the fervent love and respect which were evinced towards him by all classes of the people of Montgomery. We should, indeed, consider it as a public calamity to lose his efficient services to that community. Through the instrumentality of Mr. Davis alone, nearly 400 tons of guano have been introduced into that county, the

purchasers obtaining it in any quantity, at the importer's wholesale price in this city—the only requirement being made of them, of becoming members of the Society—a saving of some $1200 had been thus effected to the farmers in enabling them to purchase at the lowest rates—for his valuable aid therein, a vote of thanks was also presented by the Society.

After Mr. Davis had concluded his address, he introduced *Tho. F. Bowie*, Esq. of Prince George's, who made some extemporaneous remarks to the Society, for which the thanks of the meeting were tendered, and copies of both addresses were solicited for publication.

On the following day, the ploughing match, and the distribution of prizes took place, and the sale of cattle. Mr. Bayly offered his Devon stock at auction, and realized very satisfactory prices therefor. The unfavorable state of the ground, from the long continued drought, made the ploughing match one of great labor. There were but few entries made. For the best three-horse plough, Brown's patent, the premium was awarded to Mr. Artemus Newlin; to Maxfield, Mott & Co., Delaware, No. 9, two horse plough, the premium; to Mr. Howard Stabler, the premium, as best ploughman; to Hez. Cooler and Nicholas, negroes, as ploughmen, the second premium, to be equally divided

The whole Exhibition went off with much satisfaction, and we were so much delighted with our trip, that we promise ourselves a more extended visit next summer, having accepted numerous invitations to that effect; the peculiarly busy season with us at this time preventing our doing more than taking a rapid glance at the country as we passed to and fro to the Fair. Our hospitable friend S. will find that we are not only a "promising" man, but that we intend to try to be a *punctual* one.

Among the many old and new friends we had the pleasure of taking by the hand, were the venerable Maj. *Geo. Peter* and *Roger Brooke*—two of Maryland's oldest and most respected sons, both of whom have passed beyond the period of three score years and ten allotted to man, but are still in the enjoyment of that vigor of mind, with a good degree of strength of body, which is the sure evidence of a virtuous, temperate, active, useful and well spent life—they have lived to see around them a numerous progeny, amongst whom they stand like the Fatriarchs of old, revered and respected by their fellow-citizens, and enjoying and rejoicing in the prosperity and happiness of those near and dear to them, and grateful that their lives had been spared to behold the new life which they see evinced every where in the improvement of the lands, and, consequently, in the condition of their fellow-citizens. May they long be spared to adorn the position in which they are placed, is our sincere prayer to the Giver of all Good.

Major Peter commanded Fort McHenry, in this city, forty years ago; the present President of the United States served under him as a subaltern, in the west; and had he not resigned his commission in the army, for the purpose of retiring to the peaceful pursuits of life, he would, at this time, have outranked Gen. Scott, the Commanding General of the Army.

Mr. Brooke is well known as a prominent and influential member of the Society of Friends, and we found in the short visit we paid him under his hospitable roof, that he was possessed of that cheerful, contented and happy state of mind, which it is so delightful to behold in old age.

THE CROPS OF LOUISIANA.—A letter to the editor of the American Farmer, dated Jackson, La., Sept. 6, says: "The cotton crop of this region of country will be very short. During the three summer months we had rain almost every day, which made it almost impossible to keep the crops clear of grass; and now the worm is at work. The corn crop is excellent on our high lands, but not so on the low grounds of the Mississippi. The cane looks well."

THE CROPS OF FLORIDA.—A letter to the Savannah Georgian, dated near Tallahassee, Sept. 1, States, "the Caterpillars are in almost all the fields hereabouts, and are rapidly eating the leaves and young forms, &c. My opinion is, that we shall lose the top crop entirely by the worms. What with the rains and wet weather, in addition to the appearance of the caterpillar, the Cotton crop in our section will be very short."

IMPORTATION OF RARE STOCK.—The British Brig, John Hunter, which recently arrived at Charleston, brought over from Turkey ten Cashmere goats and two Buffalo calves. According to the Evening News, these animals are the first of their kind brought into the United States. These goats are truly beautiful and are covered with long silken fleeces. The buffaloes are the same as those employed in Turkey at the plough, and are said to be at maturity twice the size of the domestic ox.

We have reason to hope that some of the splendid beeves of Kentucky will be present at our Cattle Show. A gentleman has been written to, to that effect, and it is probable that a favorable response will be made.

FINE SHEEP.—Col. Ware has succeeded in purchasing the 5 ewes that took the high prize this year at the Royal Agricultural Society of England. They are to be put to the buck that took the first prize of the same society in 1847, and which weighed 425 lbs.

MEASURES OF SURFACE—HOW TO MEASURE AN ACRE.—30¼ square yards make 1 square rod.
40 square rods make 1 square rood.
4 square roods make 1 acre.
640 acres make 1 square mile.
4840 square yards or 160 rods make 1 acre.

In measuring an *acre* by yards, the usual practice is, to trace off 70 yards in length and 70 yards in width—this, in a rough way, may be considered near enough for all practical purposes; for as 70 yards either way make 4900 square yards, it exceeds an acre by 60 square yards—to determine an accurate acre, it should be measured 70 yards in length, by 69 1-7 yards in breadth. The same result may be arrived at by measuring 220 feet in length and 198 feet in width, or by measuring 73⅓ yards in length, by 66 yards in breadth.

☞ Among the beautiful samples of wheat left with us, is one called the N. Y. white, raised by Mr. M. D. White, of Kent Island, Md.—it is a smooth headed, large and plump bright grain, and the crop was sold by Messrs. Emory & Stevens at $1.37, being from 12 to 15 cts above the market price. This, we learn, was the first crop of this young farmer, and is, we take it, auspicious of future success, and we have reason to anticipate his becoming one of our best farmers on that beautiful shore.

☞ "NORTHAMPTON" will appear in our next.

DRY MEASURES.—*U. S. Standard bushel.*—The standard bushel of the United States, is the *Winchester*, which contains 2150.42 cubic inches. Its dimensions are 18½ inches diameter inside, 19½ inches outside, and 8 inches deep; and, when heaped, the *cone* must not be less than 6 inches high.

HERRING BAY.—A correspondent, "The Inquirer," gives us a glowing description of the appearance of the fields in this section of our neighboring county, of Anne Arundel, and contrasts the plentiful reward which the tillers of the soil enjoy now, from the improvement which has taken place of late years, with that which was experienced a few years ago. We rejoice to hear of these evidences of the prosperity of the farmers—for with them all other classes thrive—and when they languish, all other professions are prostrate. The corn, when our correspondent wrote, (15th August,) was very luxuriant, but the Tobacco crop was very unpromising, as it is in almost every other section, from the want of suitable seasons for setting out the plants—although, "*Inquirer*," remarks, the planters were busily engaged in doing the best they could to secure as favorable a result as possible.

TENNESSEE.—From Rich'd O. Curry, Esq., Professor of Chemistry, Mineralogy and Geology, in the East Tennessee University, at Knoxville, we have received a very respectable list of subscribers to the *Farmer*, for several post offices in that State. In remitting the same, the Professor remarks:

"I consider the foregoing list, with the cash enclosed, as the highest testimonial that I can give of the value of the *American Farmer*. I will endeavor during my leisure moments to collect a few more testimonials of the same sort."

We are gratified to receive these evidences of approbation from the Professors in our Literary Institutions. It evinces an interest in behalf of agriculture, which must eventually be of inestimable value to the country. The sciences applicable to this calling, can only be effectively introduced through the medium of our schools and colleges,—the young can be induced to take hold of them, the same as any other branch of education, whilst the adult is too apt to look upon them as too abstruse to attempt their mastery, and thus never can be induced to make the attempt. We notice with pleasure, that the East Tennessee University have shown the value and importance of agricultural pursuits, by devoting a portion of the senior year to study it, in its connection with the natural sciences, Botany, Chemistry and Geology.

KING & QUEEN CO., VA.—A subscriber in this county, writing for the back volumes of the Farmer, gives us the following gratifying intelligence of the progress of improvement in his section of Virginia: "My friend and old representative, Hon. Willoughby Newton, having some short time since paid me a visit, recommended to me the Farmer, and also to many citizens of this county, with whom he met at our court the next day—and as he is known as a useful, sound practical farmer, I think your subscription list was enlarged considerably, and I hope will continue to increase, as the farmers in this section of eastern Virginia are very much aroused in the improvement of their old and worn out soils, by the application of manures. Already has a spirit of emulation been aroused amongst us, in regard to improvement—and the beneficial results are so apparent that I think in a few years the experiments of Stabler and Capron on worn out lands, will be fully realized in this county."

A few years since I commenced in a small way the application of lime, (purchased in your city of E. J. Cooper and his successor, B. P. Power) and the farmers seeing the practical results, have commenced a system of liming, which has steadily increased every year. The other day a very poor neighbor not owning more than two acres of land, requested me to purchase both lime and guano for him; and I think if every farmer would but subscribe to the Farmer, and continue a regular system of liming and guanoing, &c. that we shall in a few years, make our poor and sterile regions "to blossom as the rose." W. D. G."

MINUTE AND VALUABLE ANALYSES OF LIMESTONES.

The following paper from the pen of Dr. *Robert Peter*, professor of Chemistry in the medical department of the Transylvania University, Lexington, Kentucky, is, indeed an able one; and will, we feel certain, be read with intense interest. The Professor's reasonings are as natural as they are conclusive, while his *analyses* of Limestones are thorough, minute and satisfactory. Most *analysists* content themselves with ascertaining how much *lime*, or how much of the calcareous principle any particular specimen of limestone, oyster-shells, or marl, submitted to them for analysis, may contain; but Professor *Peter* has gone farther, and traced the elementary bodies comprised in those analyzed by him, in every possible form. He very happily remarks, that "chemical analyses of limestones and of soils, as they are ordinarily performed, are but of very little practical value even to scientific agriculturists, because they do not include estimation of the *phosphates* and the *alkalies*, which are the really essential ingredients, but which, in consequence of their existence in comparatively small proportions, and because considerable labor and some skill are required to estimate them accurately, are usually overlooked by the analyst. It would be far better for agricultural purposes, to estimate *only* the *phosphates* and the *alkalies*, in a soil, a marl, or a limestone, than to give only the silex, the alumina, the oxide of iron, lime and vegetable matter; which really are of less importance in this relation."

The intelligent reader, while perusing the details of the various processes through which the able *analyst* carried his researches, will be very singularly struck with his notable pains-taking and exact

application of his chemical tests,—and we think all will conclude with us, that the *analyses* made by professor *Peter*, for minuteness, utility and accuracy, are the most reliable to be found on record—and that they deserve to be studied as enlightened models of the analytical science.

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PROFESSOR PETERS' ESSAY AND ANALYSES OF LIME. *Remarks on the Agricultural Value of the Blue Limestone of Kentucky; with its analysis:* By ROBERT PETER, M. D., Prof. of Chem. in the Medical department of Transylvania University, Lexington, Ky.

THE region in which Lexington is situated, has long been justly celebrated for the great and lasting fertility of its soil; which by the production of its luxurious vegetation, plentiful crops of corn, and herds of fat animals, evinces that it is rich in the elements which are essential to vegetable, as well as to animal growth.

Unlike the soil of many other parts of the world, heavy production does not quickly exhaust it. A field which has been cultivated in corn for twelve or twenty years, may be made almost as fertile as it was at the commencement, by resting it with a clover crop, or depasturing it for a time in grasses. It is, consequently, not the custom of the country to pay much attention to manures; and some of our farmers even consider the accumulations about their stables as a nuisance.

Her fertile soil enables Kentucky to export, from her rich counties, an immense number of hogs, cattle, mules and horses, a large quantity of hemp, and a considerable amount of Indian corn. The corn crop in Kentucky for 1847, was estimated at 62 millions of bushels, and during the past year, (1848,) at least 250,000 hogs have been sent abroad, to be slaughtered and consumed.

It cannot be supposed, however, that the soil will continue to maintain its fertility, under the immense drain made upon it by the exportation of its products; and old inhabitants have been for some time complaining that the long cultivated soil has undergone visible deterioration.

Since chemistry has given her assistance to agriculture, the reason of this has been made very clear. Every product of the soil takes from it, in notable quantity, certain mineral substances which are essential to its growth and formation. These are known to be, alkaline salts, sulphur and its acids, phosphoric acid, lime, oxide of iron, silica, &c. These substances are as essential to animal existence as they are to vegetables; and both animals and vegetables can no more subsist or thrive with a deficiency of these mineral ingredients than they can without water.

The saline and earthy matters, which form the ashes of plants and their products, are the same which are essential to the bones and other solids and the fluids of the animal body. Where they are abundant in a soil, other things being propitious, the vegetation becomes rich and matures a plentiful harvest, and animals grow and fatten easily on the products; for the plant draws them from the soil and works them up into forms adapted to animal nutriment. On the contrary, where they are deficient in the soil, vegetation is scanty, and the animal races dwindle and starve.

The fertility of the soil depends more on these mineral ingredients than on any other, although they really form the smallest relative proportion of the weight of vegetables and animals;—for the other ingredients of the organized bodies, viz: carbon, hydrogen, nitrogen and oxygen, are derived from the atmosphere and from water, which are universally diffused; while these mineral ingredients are the properties alone of the soil, and when present in sufficient quantity, even in pure earthy matter of any kind, they stimulate the growth of vegetables, which by their final decomposition, soon fill the earth with humus, and form the rich vegetable mould.

Amongst the most important of these is phosphoric acid, which, in union with lime, magnesia, and perhaps oxide of iron, enters into the structure of all vegetables, and the more nutritious the vegetable substance, the larger is its proportion of the acid. The grains are peculiarly rich in it:—Boussingault remarks that no seed is known which does not contain it. Hence, a plant, growing on a soil which does not afford it, never matures its seed, and the production of seeds of any kind speedily exhausts a soil.

Phosphoric acid is equally essential to animal growth, it being a constituent part of all the organs of their bodies, and particularly of their bones, the earthy matter of which being mainly phosphate of lime.

An idea of the quantity of phosphoric acid which is anually taken from the soil, may be obtained by studying the chemical analyses of the ashes of vegetable substances.

Indian corn gave me more than 1 per cent. of ashes, of which 50 per cent. is phosphoric acid. Wheat gives nearly 2½ per cent. of ashes, of which more than 60 per cent. is phosphoric acid. Oats and rye contain it in but a little smaller proportion, and every 1,000 pounds of dried hay contains about 3½ pounds of this acid. In short, the ashes of wood and all vegetable substances, are rich in phosphates, and hence the utility of even leached ashes as a fertilizer.*

In every bushel of Indian corn sent out of the state, we export about one third of a pound of phosphoric acid; and in the bones and body of every hog, there is at least two pounds of this substance; so that in her 250,000 hogs exported during the year just terminated, Kentucky has sent off at least 500,000 pounds of this valuable ingredient of her soil. Taking into consideration the whole of her exports, in animal and vegetable products, the amount of phosphoric acid sent away every year from the fertile counties alone, must be much above a million of pounds.

As this indispensable ingredient exists but in a small relative proportion in the best soils, continued exportation of products, without a corresponding importation of the mineral elements of animal and vegetable substances, must impoverish the country.

In some parts, Guano, which is rich in these matters, can be and is used, to supply phosphates. In England it is found advantageous to import bones, from a distance, and to grind them to powder, to spread them on the soil; which application increased the product, in some places, in two and even three fold proportion.

* I refer the reader to *Boussingault's Rural Economy*, (translated by Geo. Law, and published in 1845, by Appleton, N. York,) for many interesting facts in this relation; and many reports of the analyses of ashes of vegetables are given by Dr. W. Knop, in the Vol. XXXVII of the *Journal fur Praktische Chemie*—p. 34.

In a country which consumes its own products where they are raised, and in which the animal excretions are not allowed to be washed away in the streams and rivers, the soil is kept fertile by the constant restoration to it of these mineral ingredients, in the bones and excretions of animals which are applied to it. And political economists see in this fact, apart from other considerations, an immense advantage in a *home consumption*, by home manufacturers;—in "placing the anvil by the side of the plow." But when, as is the case of Kentucky at present, there is a constant exportation of vegetable and animal products, which are rich in the most valuable and indispensable ingredients of the soil, the fatness of the earth is steadily and certainly transferred from the exporting to the importing country; and the land of the former will become poorer and poorer, unless these valuable ingredients are, from some source, resupplied to it.

Reflections of this kind caused me to turn my attention to the rock stratum which underlies this fertile region, with a hope of finding in it some compensation for this annual loss of the phosphates and the other essential elements of the soil. This rock is of the "Blue Limestone formation," a lower member of the *Silurian formation* of the English geologists. It is the equivalent of the "Trenton Limestone," of the New York geologists; and like that is full of the fossil remains of marine animals;—the shells, crusts, coralloid structures, of the ancient denizens of the primeval ocean, under which it was evidently deposited; giving promise, to the analyst, of the presence of all those ingredients essential to animal as well as to vegetable structures, and which have been already referred to as existing in all fertile soils.

Our limestone presents various characters in its different layers; some being hard, of a semi-crystalline structure, and of a blueish gray color; other specimens are more earthy in their composition, more shaley, of a darker color, falling readily to powder on exposure to the atmospheric agencies; all being in layers of greater or less thickness, the solid masses being separated generally by shaley matter.

The hard gray rock is quite durable in its nature, and is extensively employed for turnpikes, for the foundation of houses, steps and walls; but all varieties changed to a dirty buff color on the surface, in time, by the peroxidation of iron; and disintegrate more or less rapidly, on exposure to the air; in consequence, doubtless, of the presence of protoxide and sulphuret of iron in the rock, which break up its structure when they unite with the oxygen of the air; as well as by reason of the presence of its numerous shells, and other fossil remains, which occasion minute fissures, into which water and air penetrate, and with the aid of frost, cause the rock finally to crumble.

The hard layers burn into very good fat lime, which makes good mortar, but in consequence of the quantity of oxide of iron present in it, the color is not as pure as is desirable for nice whitewashing.

But few trials have been made of the fertilizing powers of this limestone by our farmers, although it is so abundant and so easily to be obtained; no doubt because new land is so cheap in the United States, and labor dear; more especially, because no immediate want of fertilizers is felt by our agriculturists. But on the edges of our McAdamized roads, the corn rows which receive the powdered limestone in the form of dust, are observed to be more flourishing than the others; and in places where the soil is very thin, and filled with fragments of the limestone, the produce is always very good when the season is not too dry. Gardeners, who have employed it on their small crops, speak highly of its ability as a fertilizer.

It has been the custom in England and other countries, as well as in some parts of the United States, to use lime very freely on the arable land. It is, indeed, considered almost essential to the production of wheat; and enormous quantities of it are spread in some localities. A difference of opinion exists as to *the manner* in which the lime acts to improve the soil; for example, it is supposed that it aids the solution of hard vegetable substances;—that it brings the silex of the soil to a soluble condition, and that it warms the earth and stimulates vegetation in some indefinable manner. But it is probable, that if correct analyses were made of those limestones which are known to be the best fertilizers, another reason for its utility would be found in the presence in it of the essential mineral elements of vegetables, viz: phosphates of lime and magnesia, sulphate of lime, oxide of iron, potash, soda, &c.

Chemical analyses of limestones and of soils, as they are ordinarily performed, are of but little practical value even to scientific agriculturists, because they do not include the estimation of the phosphates and the alkalies; which are the really essential ingredients, but which in consequence of their existence in comparatively small proportions, and because considerable labor and some skill are required to estimate them accurately, are usually overlooked by the analyst.

It would be far better, for agricultural purposes, to estimate *only* the phosphates and the alkalies, in a soil, a marl, or a limestone, than to give only the silex, the alumina, the oxide of iron, lime and vegetable matter; which really are of less importance in this relation.

During the past month or two, in my leisure moments, I have submitted to analyses, several specimens of the Kentucky Blue limestone, and have been much gratified to find my anticipation realized in relation to its agricultural value, as will be seen by reference to the results given below.

Specimen No. 1. is of the hard grey limestone; it was dug out of a well in the city of Lexington; it contains geodes lined with brown spar, pearl spar, calc. spar and fluor spar and the usual fossils; its specific gravity is 2-45 in a dry specimen. On analysis, it was found to be composed of the following materials, viz:

Carbonic acid	36.675
Phosphoric acid	1.350
Sulphuric acid	807
Lime	47.046
Magnesia	900
Alumina and oxide of iron	9.880
Fine sand and silicates	1.790
Moisture and loss	1.552
	100.000

Specimen No. 2, from the hard thin layers which are more superficial than the first in this locality, yielded:

Carbonic acid	40.53
Phosphoric acid	36
Sulphuric acid not estimated	
Lime	50.97
Magnesia	66
Oxide of iron	32

Alumina	15
Sand and silicates	6.52
Moisture and loss	49
	100.00

In addition to these ingredients, potash and soda were obtained from the limestone, whenever the proper processes were employed; in one case as much as 0.0487 per cent. of potash; in another, 0.-0058 per cent.

In two other specimens the proportion of sand, &c., was found to be as much as 13.5, and 20.3 per cent. As much variety, no doubt, exists in the composition, as in the appearance of the different layers of the limestone.

Iron is present in the blue and gray rock partly in the form of protoxide; there is also some sulphuret of iron diffused throughout it, which by oxidation produces sulphate of lime or gypsum. Sulphur, it is well known, is an important element of plants, especially of the most nutritious kinds, as the cabbage; it is also found in the mustard, the turnip, and in almost all animal tissues.

Our limestone therefore contains all the mineral ingredients necessary to organic nutrition, viz: phosphorus, sulphur, lime, magnesia, oxide of iron, silex and potash, and soda in small quantities.

Some specimens appear to contain a larger proportion of phosphoric acid than is stated above; one analysis gave me as much as 2.57 per cent. as estimated by the precipitated phosphate of iron. As the presence of this acid, in the rock, is a fact of great importance, and the processes for its correct estimation require great care, I have taken great pains to arrive at positive certainty in regard to it, and in consequence of my desire to separate it fully from all impurities, my estimation of its percentage is, no doubt, below the truth, from the unavoidable loss which this substance sustains in the various processes used. The chemist will understand this when I describe these processes.

1. The ground limestone was dissolved in hydrochloric acid, with a little nitric, and the solution filtered from the sand and silicates.

2. Pure ammonia, and chloride of ammonium, were added to the boiling solution, and the precipitate was, after careful washing, re-dissolved in a little hydrochloric acid. This contained oxide of iron, alumina and the phosphates.

3. Acetate of soda was boiled with the solution, (2,) sometimes with the addition of some chloride of iron, which threw down all the phosphoric acid as phosphate of iron. There was generally enough oxide of iron in the limestone to combine all the phosphoric acid.

4. The precipitated phosphate of iron was re-dissolved in hydrocloric acid, with tartaric acid and ammonia, and the phosphoric acid was thrown down from the solution by sulphate of magnesia.

5. This precipitated ammonai-phosphate of magnesia was re-dissolved by hydrochloric acid, and precipitated again by ammonia, and after thorough washing, was ignited and weighed, and the phosphoric acid estimated.

Not content with this, the phosphate was dissolved in nitric acid carefully precipitated by nitrate of silver and ammonia: from the precipitated phosphate of silver the silver was removed as chloride, and by the evaporation of the liquid, the phosphoric acid was obtained in the glacial state, by gentle ignition in a platinum capsule.

The original precipitate (2) containing the phosphates, was also treated in another way. Dissolved in nitric acid, acetate of lead was added to its solution, until all the phosphoric acid was thrown down as phosphate of lead; which, after being well edulcorated, was re-dissolved in a little nitric acid, and the lead separated by means of sulphuretted hydrogen. The filtered liquid evaporated as above, yielded the glacial phosphoric acid; which, re-dissolved in water, was estimated as pyro-phosphate of magnesia.

In the glacial form, by this last process, the phosphoric acid weighed 3 per cent. after moderate ignition. But this acid is so hygrometric that it cannot be correctly estimated in the uncombined state.

In the estimation of the magnesia, the usual mode is to precipitate it from the filtrate* (2) by adding phosphate of soda; but as the ammonio-phosphate of magnesia is not wholly insoluble in a solution of chloride of ammonium, I used the process of Berzelius, viz: ignition with the oxide of mercury; or, what is still more convenient, a modification of the process of Boothe as follows:—Sulphuric acid in sufficient amount was added to filtrate (2,) and the mixture was concentrated by evaporation. Alcohol, in equal volume was then added, and the precipitated sulphate of lime was washed with diluted alcohol. The sulphate of lime, ignited and weighed, gave the proportion of lime, while the filtrate gave on evaporation, the magnesia in the form of sulphate.

The proportion of carbonic acid was ascertained by the process of Fresenius.

I give this abstract of chemical processes that competent persons may be enabled to judge as to the value of the analyses.

It must be evident, from the foregoing facts, that the Blue Limestone of Kentucky, should it generally be found to resemble that above described, will be a valuable agricultural resource, when the soil begins to show the inevitable consequences of the constant exportation of its products; and that, with this immense source of fertilizing materials beneath our feet, we need never fear the thorough exhaustion of our soil.

One bushel of lime, such as specimen No. 1, containing about 1⅔ lbs. of phosphoric acid will yield phosphates enough for 5 bushels of corn; while 2 or 3 bushels of lime would supply all that are carried away in the bones and body of a hog.

By actual experiment, within my own knowledge, of burning 2700 bushels of lime in one rude kiln;—the rock having been purchased at 50 cents per perch of 24⅔ cubic feet; the wood at $3 per cord, and the labor estimated at 75 cents per day,—it is found that lime can be obtained for 10½ cents per bushel.

Our farmers, with their own wood, and farm hands, can burn it much cheaper, and I do not doubt that if they make the experiment on a sufficiently large scale, they will find their labor and expenditure well repaid, whether they use it in the cornfield, on their wheat, or clover, or on the orchard. All vegetables require the elements which are found in it, and it cannot come amiss any where, when applied in the proper manner.

It may be used in the proportion of from 20 to 50 bushels to the acre; spread in the fall, on the surface, in the dry slaked state.

It is especially recommended for the potato crop. Potatoes, and particularly the stalks, are found to contain a large proportion of phosphoric acid in

* Filtrate, i. e. the liquid filtered from the precipitate.

their ashes, and it is probable that their liability to "the rot" may have some relation to the deficiency of phosphates, in the soil. *January* 1849.

REMARKS.—The reader will see from the above statement of the usual processes for determining the amount of phosphoric acid in any earthy substance how complex and tedious is the labor of making a critical analysis of soils. To ascertain accurately the quantity of gypsum, potash, soda and magnesia, as well as the amount of phosphate of alumina, iron and lime in a soil, it is desirable to operate on more than 100 or 1000 grains of earth, after it has been dried and burnt. These ancient limestone, and most other sedimentary rocks, having been formed in the bed of an ocean, it is inconceivable how a little of the several minerals dissolved in it should not be mingled with all precipitates and mechanical depositions. *Dr. Lee, of Southern Cultivator.*

HORTICULTURAL.

WORK IN THE GARDEN.

There is not a great deal to be done in the garden this month, but what there is should be attended to. You will recollect that we advised you last month to sow several kinds of cabbage seed, with a view of setting out the plants this month, in order that you and yours might have a supply of early cabbages next summer, and promised to tell you how to set them out so that they would withstand the winter's frost. To redeem our promise is now our purpose.

Preparation of the Bed for the Cabbage Plants.—Select a dry bed, manure it heavily, spade up the ground at least a spade deep, cut the slices narrow, and take care to turn the manure in well; rake thoroughly as you proceed. Stretch a garden line across your bed, from east to west, and form ridges with a hoe three feet apart, about four inches high: on the *north* side of these ridges place a plant at the distance of six inches asunder, about half-way down the ridge. This closeness of planting will allow for the killing out by frost, and the drawing of plants in the spring to use as sprouts, it being intended that those for heading shall, ultimately, stand two feet apart in the rows. About the 20th of November, long dung from the stable should be laid along the plants about two inches deep to protect them through the winter. In the spring, as soon as the frost is out of the ground, the plants must be worked with the hoe, by hauling down the ridges and lightly hilling them, which operation of working the plants must be continued afterwards, at intervals, until the cabbages begin to head, the object being to keep weeds down and the soil open.

Spinach and Lettuce.—Your beds of these vegetables must be thinned out, and the plants worked. Plants may still be set out on warm borders with southern exposures.

Broccoli Cabbages.—Give these a hoeing.

Endives.—Tie up your endives for blanching.

Asparagus Beds.—So soon as the stalks of your asparagus turn yellow, cut them down close to the earth, carry them off the ground, weed out the beds, and if you have any rotten horse dung, or rich well rotted manure, strew it over the beds and fork it into the earth in the alleys, and rake. In the spring, early, re-fork the alleys and strew salt over the bed so as to whiten the soil.

Celery.—Continue to earth up your celery for blanching.

Rhubarb.—Prepare a bed and sow rhubarb seed.

Challots, Chives and Garlic.—The roots of these may now be transplanted.

Seed Onions.—This is a good time to set out seed onions.

Horse Radish.—Prepare a bed by manuring, digging and raking well, and set out horse-radish.

Potatoes, Carrots, Beets and Parsnips.—Any time after the 20th of this month you may take up these roots and store them away for preservation.

Raspberries, Currants and Gooseberries.—May be transplanted any time this month.

Flowering Shrubs.—Towards the latter part of this month plant out the flowering shrubs.

Flowering Bulbs.—Prepare your beds and plant out flower bulbs—let the manure you use be well rotted, and be liberal in its application.

FLORICULTURE.

Prepared for the American Farmer by John Feast, Florist, No. 279, Lexington street, Baltimore.

WORK FOR OCTOBER.

The flowering plants of the *stove*, the *green-house*, as well as those in the borders of the *flower garden*, require particular attention in repotting, tying and cleansing from all decayed stems, or irregularity of growth that would convey an idea of wildness or neglect; those plants that have not been repotted or attended to, should be done before putting in the house, and carefully watered and shaded for a few days, either in or out of doors, but it is best to have them protected by the 10th to the middle of the month, and by giving plenty of air they will do much better in the house. Many plants in the borders might be lifted for flowering till the middle of winter, as *chrysanthemums, verbenas, gilliflowers*, with such others as have been plunged for the purpose.

Mignonette, save in pots for winter flowering, if not done last month, or transplant from the borders—but great care should be taken in their removal to have good roots.

Roses that have been layered, if rooted, may be repotted in small pots, and kept in a close frame until they are fresh rooted, but be careful in watering, as they are apt to damp off at the root. Also, *carnations* may be treated in the same way—too much moisture destroys them; but much depends on the proper soil for success, and I find that a strong rich loamy soil suits them best. All *roses* that are intended for winter flowering may be repotted, as well as cuttings, and put in the greenhouse or frame.

Much depends on the preparation in the garden this month, for success next spring, as the borders will have to be prepared for planting of bulbous roots, as *hyacynths, tulips, narcissus, iris, jonquils, snowdrops, &c.*, and some might be planted in pots, for flowering in the winter, if required in the house.

Seedling herbaceous perennial roots that are large enough to plant out, might be transplanted where they are to flower next year, but have the borders well prepared; a good depth of soil, if two feet the better; a great neglect prevails here, as regards the flowering of all plants, there is nothing to nourish them, only a depth of a few inches.

Perennial roots, such as *phloxes, dracocephalums, lychnis, spireas, campanulas, delphiniums, aconitums, liliums*, and other hardy border plants, might be transplanted this month, and there is nothing more showy, with less trouble in the borders, as they

stand the winters, and bloom fine most of the summer.

Dahlias will be in fine bloom if frost keeps off—they will need attention in tying and supporting the stems, and when cut down, might be taken up and left to dry before putting away; also *tuberoses, ferrarias, jacobea lilies*, and other bulbous roots that don't stand the winter, may be kept in dry sand in some cool dry situation from the frost.

All shrubbery may be transplanted this month, and it is the best time for box edging to be put down, to line the walks; it stands better, and looks as well as any other for that purpose, if properly kept in order, and should be generally recommended, and kept neatly clipped to have a neat appearance. Many of the annual, biennial and perennial flower seeds might be sown in pots or boxes in the house or frame, and out of doors, such as *rocket larkspur*, for flowering early in the spring.

METEOROLOGICAL TABLE,

From the 21st of August to the 21st of September.

Kept at Schellman Hall, near Sykesville, Carroll County, Md.

Taken at 6 o'clock, a. m., 2 o'clock, noon, and at 6 o'clock.

	Wind.			Temperature			Remarks.
	as	as	w	70	83	80	Cloudy, shower, clear
	w	w	w	67	83	78	Clear
	w	w	w	73	79	76	Cloudy, shower, clear
	w	w	w	64	79	69	Clear
	w	w	w	60	80	74	Clear
	w	w	sw	65	84	76	Clear
	e	sw	sw	61	80	74	Fog, clear
	e	se	s	64	81	74	Cloudy
	e	s	se	70	75	74	Rain 2 in., clear
	e	se	s	70	80	77	Fog, clear
	e	w	w	71	75	75	Cloudy, rain 3-4 inch
	nw	nw	nw	60	67	65	Clear
	nw	nw	nw	54	69	66	Clear
	nw	nw	w	48	69	65	Clear
	e	s	w	61	70	68	Cloudy, shower ½ inch
	se	w	sw	66	76	74	Fog, clear
	w	sw	sw	64	76	74	Clear
	sw	nw	nw	67	72	67	Clear
	nw	w	w	49	70	65	Clear
	nw	w	s	49	67	65	Clear
	nw	nw	nw	45	73	67	Clear
	w	w	w	50	33	68	Clear
	e	se	se	50	73	68	Clear
	w	w	w	60	75	67	Fog, clear
	w	se	se	55	77	73	Clear
	w	w	w	57	80	75	Clear
	s	w	w	59	82	78	Clear
	s	s	sw	65	86	78	Clear, cloudy
	s	s	s	69	74	67	Clear
	se	se	se	54	68	64	Clear
	se	se	se	55	63	62	Cloudy

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer, by J. W. & E. Reynolds.

In the price of Maryland Tobacco there has been no improvement since last month; and throughout it, there has been considerable activity. The number of hogsheads inspected up to the present time exceeds the number inspected during the whole of the last year by several thousands. Nothwithstanding this is the case, the stock that arrives here does not accumulate—the demand being fully equal to the supply, at prices ranging from $2½ to $2⅞ for ordinary common; $3 to $3½ for ordinary dark and mixed crops and seconds; $3¾ to 4¾ for middling to fine and seconds; $5 to $6¼ for good, and $6¼ to $8½ for fine and colourey descriptions. The finest qualities, raised in the upper portion of the State, sell at $10 to $16. The stock of gro. leaf in first hands is very small, both here and in Europe; and what are on hand are very common. We think fine gro. leaf, free of dirt, will be in demand this fall, and will command good prices.

Wheat has slightly declined since August. We quote white, $1.05 to 1.10; red, $1.03; family flour, $1.15. Corn, 56 to 59 for white; 60 to 61 for yellow. Oats, 28 to 32c. Rye, 57 to 59c.—SEPT. 29.

Flour.—Howard street and City Mills, $5. In consequence of the want of water in the mill streams, there is no stock on hand. *Whiskey*, 26½c. in hhds., and 27 a 28 in bbls.. *Cattle.*—Supply at the scales large, stock good, and sales active, ranging at $2 a 3.12 on the hoof, equal to $4 a 6 nett, and averaging $2.50 gross. 1,100 head offered on Monday last, of which 550 were sold, 100 left over, and 450 sent to Philadelphia. *Hogs.*—Ready sale at $4.50 a 5. *Timothy Seed*, $3.62 a 4. *Clover Seed*, $4.75 a $5 for prime. *Guano.*—No change in this and other fertilizers since our last report.

Chappell's Fertilizer.

THIS CHEMICAL COMPOUND, for which *Letters Patent* has been obtained, has now stood the test of successful experiment, and fully confirmed, by its use, the correctness of the principles in vegetable organization, on which it is based, and may be considered a beautiful illustration of the useful application of Chemical Science to the purposes of Agriculture. Its adaptation to all soils, and the success which has resulted from its use on *Wheat, Rye, Oats, Corn, Potatoes*, and *Garden Vegetables*, has fully established its reputation, as a powerful fertilizer of the soil, and the most economical agent which can be used to resuscitate worn-out and sterile land and prepare it again for Agricultural use. The principles in Vegetable Physiology, which the use of this article has established, has opened and shed new light on many of the hitherto mysterious laws of nature, by which vegetable growth is produced. It only requires a favorable season of *moisture* and *temperature* to secure the most surprising results. These physical elements are equally necessary for the successful use of any other manure. This article is not an exception in this respect. Its action on Wheat and Clover has been fully confirmed by a yield of 15, 20 and 25 bushels of grain to the acre, and the land left in an improved condition with a fine crop of Clover. It is preferred by many to Peruvian Guano, as, by its use, fully as large a yield of grain has been produced, while the crop of Clover has far exceeded that from the use of Guano.

It is the only genuine "Agricultural Salts;" all others are but poor attempts at imitation and to be avoiced. Wherever other professed "Agricultural Salts" are used we desire particular attention to be paid, as we do not wish our article to suffer in reputation by confounding others with it. It is the success and wonderful results which have attended the use of our Fertilizer which prompted the cupidity of others to attempt an imitation; time only is necessary to prove the great superiority of ours over all such innovations on our right to the reputation obtained from the use of "Agricultural Salts" as a manure.

Pamphlets on the "origin, use and action," with directions and recommendations from some of the most respectable and influential Agriculturists in the State, can be had at our office, up stairs, corner of Hanover and Lombard streets.

P. S. CHAPPELL, Manufacturing Chemist.

☞Every barrel is stenciled "Chappell's Fertilizer;" *none other is genuine.* oc1

THE "CARPENTER'S POINT FISHING SHORES" ARE OFFERED FOR RENT FOR THE SEASON OF 1850.—These shores lie along the waters of the Chesapeake Bay and of the Northeast river, and to the advantages of situation add those of a complete set of Buildings and Sheds, and a long established custom of purchasers of fresh fish. Proposals will be received by S. Sands, Esq., Editor of the American Farmer, or by the subscriber.

J. HOWARD McHENRY.

☞The entire Carpenter's Point Property is offered for sale on very moderate terms. Apply as above. sep 1.

Guano! Guano! Guano!

PERUVIAN GUANO, Amaises cargo, in cotton bags—Patagonian Guano, African do. Chilian do., for sale in lots to suit purchasers, by T. W. & L. LEVERING, No. 114 Pratt-st. Wharf.

Also Clover Seed, Timothy Seed, Orchard Grass, Herds' Grass, &c.

MC CORMICK'S REAPING MACHINE for sale by E. WHITMAN, Jr. jun 1

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.—*GEORGE PAGE*, Machinist & Manufacturer, Baltimore st. West of Schroeder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from $65 to $200, and each simple, strong and powerful. His *Horse Power & Thrashing Machine*, he is prepared to supply at the low price of $125 complete; the Thrashing Machines without the horse power, according to size, at $30, 40, 65 and $75; Improved Seed and Corn Planter, Portable Tobacco Press; Portable Grist Mills complete, $12.

AGRICULTURE.

THE Subscriber offers his services to the Agriculturists, for the purpose of examining farms, analyzing soil, giving advice on agricultural subjects, and for purchasing on commission, for clubs or individuals, Guano and Agricultural Salts, of every description and quantity, in this or other ports, as may be to the interest of Agriculturists.

The subscriber will be found at the Farmers' Club room, Baltimore street, or No. 2 North Liberty st. All letters (post paid) addressed to the subscriber will be attended to.

aug 1-3t* WM. BAER, Agricultural Chemist.

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

feb. 1-tf. PELL & ROBINSON City Block

Agricultural Agency.

THE undersigned offers his services to the patrons of the "*American Farmer*," as an AGENT for the purchase of GUANO, PLASTER, LIME, and other Fertilizers—and also for the purchase and sale of STOCK, AGRICULTURAL IMPLEMENTS, &c. Having very favorable facilities for the transaction of business, he thinks he can render essential service to his friends who cannot make it convenient to make their purchases in person. Experience renders it necessary for him to add, that all orders must be accompanied with the Cash, or city acceptances, before any article can be shipped.

Address, SAMUEL SANDS,
sep 1-tf Office American Farmer, Baltimore, Md.

AGRICULTURAL SALTS.

THE subscribers are now prepared to furnish from the MARYLAND CHEMICAL WORKS, any quantity of this very valuable manure, which they can recommend to be equal if not superior to any in this market.

QUALITATIVE ANALYSIS.

Sulphate of Potash,
" Soda,
" Lime,
" Ammonia,
" Magnesia,
" Alumina,
Biphosphate of Lime,
Hydro Carbonate of Magnesia,
Pex Oxide of Iron,
Alumina,
Vegetable and Animal Charcoal,
Silicate of lime.

Price $3 per bbl. of 300 lbs.

For Sale by
ROBERT SINCLAIR, Jr. & Co., Agents,
Or
SAM'L. & PHILIP T. ELLICOTT,
sep1-3t 45 Light street, Baltimore.

SPLENDID COLORED DAGUERREOTYPE PORTRAITS.
By C. W. PURCELL, (late operator for *Broadbent & Cary*,)
No. 128 BALTIMORE STREET,
Over the American Office, and adjoining the Farmer Office.

HAVING a thorough knowledge of all the latest improvements in this beautiful art, Mr. Purcell feels a confidence in assuring the public that all pictures taken at his establishment shall combine a most correct likeness with the highest artistical skill. He will undertake to give the fullest satisfaction, or no charge will be made.

Ladies and gentlemen are requested to call at his rooms and examine his specimens. sep 1-1y.

Guano! Guano!! Guano!!!

FOR SALE at reduced rates, in lots to suit—
Peruvian Guano, Government importation, in white cotton bags.
Patagonian Guano, of the Curtis' cargo, very dry and strong and clear of stone.
Patagonian Guano, ship Hibernia's cargo, in bags and barrels.
Patagonian Guano, of ship Caledonia and Stephen's cargoes, in bags.
Prime new Timothy Seed.
" Clover Seed.
Ground Bones and Ground Plaster.

They guarantee the purity of all guanos passing through their hands; and persons ordering may depend on obtaining it on as favorable terms as tho' purchased in person, and every attention will be given to its proper shipment.

W. WHITELOCK & CO.,
sep1-2t Corner of Gay and High streets, Baltimore.

AGENCY

For the Purchase and Sale of Improved Breeds of CATTLE, SHEEP, SWINE, &c.

I WISH to remind the farmers and planters of the Southern and Western States, that I still continue to purchase and sell improved Stock,—such as Cattle, Sheep, Swine and Poultry, of the different kinds and breeds, on a very reasonable commission. They will be carefully shipped, or sent away as ordered.

All letters, post paid, addressed to me, at Philadelphia, will be attended to without delay.

sep 1 6t AARON CLEMENT.

Baltimore Fire Insurance Company.

No. 24 South Street, Baltimore.

THIS old established Company (incorporated by the legislature of Maryland, 1807,) continues to *INSURE AGAINST LOSS OR DAMAGE BY FIRE*, in the city or country, on the various descriptions of property: On Farm Barns, Granaries, &c.—on Dwelling Houses, Storehouses and Warehouses,—on Merchandize—on Country Produce—on Household Furniture—on Vessels Building, on Vessels in Port, and on Cargoes, &c. &c.

The Board of Directors is composed of the following gentlemen:

J. I. COHEN, Jr., President.

William Frick,	David S. Wilson,
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☞For forms of application, and any other information, apply at the office, No. 24 SOUTH STREET, where all calls are immediately attended to. Insurance can also be effected for any length of time that the applicant may desire.

**Applications for insurance in the country can be made by letter direct, or through the medium of correspondents of the party, residing in Baltimore. Answers can be promptly given, with all relative information which may be desired. Letters to be addressed to

FRED'K WOODWORTH, Sec'y.
Baltimore, September, 1849. sep1

GUANO.

PERUVIAN and PATAGONIAN GUANO just received and now landing.

We are now receiving a large supply of PERUVIAN and PATAGONIAN GUANO, very dry and of superior quality, neatly put up in bags of from 150 to 200 lbs each, with Inspector's brand, which we offer to dealers and agriculturists, in quantities to suit, at *very lowest* market rates.

P. MALCOM & CO.,
Dealers in Grain, Seeds, Flour, &c.
aug 1-3t No. 1 Wood street, Bowly's Wharf.

BONE-DUST AND POUDRETTE ESTABLISHMENT.

On Harris' Creek, at Canton, Baltimore.

THOMAS BAYNES, continues the manufacture of POUDRETTE, and is prepared to supply any orders for the same—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His *BONE-DUST* weighs from 55 to 60 lbs. to the bushel, and as fine as any article sold in this market. Price of Bone Dust 55 cents per bushel. Poudrette, $1.20 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 20 cents per bushel.

☞Any orders left at the factory, or with Mr. S. SANDS, editor of the "*Farmer*," at the State Agricultural Society Rooms, will receive immediate attention. Terms, cash. my 1-6

AGRICULTURAL MACHINERY, SEEDS, &c.

R. SINCLAIR, Jr. & Co.

ARE manufacturing and will have for sale during the Fall months—

50 Wheat Drilling Machines, warranted the most perfect in this country.

250 Single and Double Iron Spout Corn Shellers—best pattern for hand power.

200 Vertical Corn Shellers, very simple and strong.

150 Virginia Cylindrical Corn Shellers, (see figure,) made for hand or horse power—separates the Corn from the Cob, and rates A 1.

25 Goldsborough's, Atley's and Smith's Corn Shellers—all powerful horse power machines.

200 9 in. 11, 12½ and 14 inch Cylindrical Straw Cutters, these are the most perfect and durable machines for cutting straw, hay, fodder, &c. yet introduced—Corn Stalk Lacerators attached to order.

100 Corn and Cob Crushers—these are also fixed for *crushing oats*—an excellent and simple machine.

30 Fanning Mills yet remaining unsold—all made with late improved separating fixtures.

LEVER HORSE POWERS—3 sizes made for the capacity of 2 to 10 horses.

RAIL WAY POWERS—greatly improved, for 1 or 2 horses.

THRASHING MACHINES—4 sizes.

1500 PLOWS.

We make an endless variety of Plows, the following however, are most prominent.

2 and 3 furrow Gang PLOWS for seeding and cultivation.

Maryland Self-sharpening Plow—this pattern is probably the best sod plow on the list.

Sinclair & Moore and Davis Plow—very simple and made with cast iron points.

Beach Plow, Wiley's double-pointed and Chenoweth's Plows.

Minor & Horton's and other New York Plows, made very usable and cheap.

Subsoil Plow, Double Mould Board Plow, Barshear, Plow, &c.

Plow and Machine Castings, by retail and wholesale.

FIELD SEEDS.

Clover, Timothy, Orchard and Herds' Grass seed—all prime quality, and growth of 1849; also, Lucerne, Rag Grass, Millet Seed, &c.

R. SINCLAIR, JR. & CO.
sep1 62 Light street, Baltimore.

A. G. MOTT,

MANUFACTURER OF PLOWS, HARROWS, CULTIVATORS, GRAIN CRADLES, WHEAT FANS, CORN SHELLERS, CYLINDRICAL STRAW CUTTERS, &c. &c.

☞ Plow Castings, of the New York composition chilled metal, always on hand, and old implements repaired, at No. 5 EAGER STREET, adjoining the Bel-air Market, Baltimore.
Jaa1

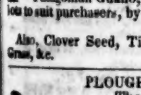
Guano! Guano! Guano!

PERUVIAN GUANO, Amaises cargo, in cotton bags—Patagonian Guano, African do., Chilian do., for sale in lots to suit purchasers, by

T. W. & L. LEVERING,
No 114 Pratt street Wharf.

Also, Clover Seed, Timothy Seed, Orchard Grass, Herds' Grass, &c.

PLOUGHS! PLOUGHS!!



The subscriber is manufacturing Ploughs of various patterns and of different sizes; also Wheat Fans, Cylindrical Straw Cutters, Corn and Tobacco Cultivators, CORN SHELLERS, &c. Also,

THRESHING MACHINES and HORSE POWERS—these latter are used by the following gentlemen, to whom reference is made, as to their superior value, viz: Messrs. T. Beard, The Beard, Dr. Watkins, J. T. Hodges, T. Welsh, W. Mackall, J. Ingichart, A. Sellman, R. Sellman, W. Hopkins, J. Kent, Geo. Wells, Geo. Gale, Dr. Fenwick, A. Franklin, J. C. Weems, of Anne Arundel county; G. W. Weems, J. T. Barber, R. B. Chew, W. Boswell, Y. Howes, of Calvert co., Md. Agent of Evans Davis, Baltimore co. for sale of the woodcock Plow. Pennsylvania Grain Cradles.

CHAS. H. DRURY.
Gillingham Alley, entrance from Howard-st., near Pratt, and store, Hollingsworth-st. corner Pratt.
mal

GUANO.—Peruvian, Patagonian, and other varieties, warranted Genuine, and of the latest importations, For Sale on accommodating terms, by

S. FENBY & BRO.
Corner of Gay and Pratt sts. Baltimore.
Also—Ground Plaster in bbls. sept.1

CIDER MILLS.

THE CIDER MILL which has taken the place of most others in the State of New York and the New England States is now for sale by

E. WHITMAN, Jr.,
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Price, $25. oc1

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THE GENUINE MULTICOLE RYE, a very superior article, for sale by

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PIERSON'S IMPROVED WHEAT DRILL. Price, $100. For sale by

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PROUTY & MEARS', Ruggles, Nourse & Mason's, Minor & Horton's, Chenoweth's, Davis', Woodcock's, Sinclair & Moore's, New York Ploughs, &c. &c., for sale by

E. WHITMAN, Jr.,
Agricultural Warehouse and Seed Store,
myl Cor. of Light and Pratt st., Baltimore.

WHEAT FANS.

GRANT'S, Bamborough's, Strong's, Rice's, Hayford's, and all good Fans, will be kept for sale by us, this season, as as low as can be bought in the State.

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PREPARED GUANO.

THIS is not an adulteration of the imported guano, but a compound of some eight domestic permanent and well known fertilizers, Bone Dust being a component part thereof. Having been appointed, by Kentish & Co., of New York, as Agent for the sale of this article, we are now prepared to furnish it to farmers and gardeners at New York prices.

☞ Price $30 per ton.

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CHURNS.

WE have the exclusive Agency for the sale of Kendall's Churn, and can supply the trade at Boston prices.

E. WHITMAN, Jr.,
Agricultural Warehouse and Seed Store,
myl Cor. of Light and Pratt st., Baltimore.

FARM SCHOOL.

THE *Mount Airy Agricultural Institute* will commence its Winter Session on the first Thursday of October next.

The course of instruction pursued, is such as to insure to the student a thorough knowledge of the *Natural Sciences*, collateral with a full practical course on the farm, in all the labor of which the students participate.

For further particulars address the Principal.

JOHN WILKINSON.
Germantown, Pa., August 15th, 1849. sep 1-2t

FOR SALE—100 bushels of BONE SHAVINGS—by

R. BALL,
febl-tf East Falls Avenue, near the Bridge, Baltimore.

LEVI MAXFIELD. N. U. MOTT. T. EDWARD HAMBLETON, JR.

THE FARMERS' NORTH-WESTERN REPOSITORY!

AGRICULTURAL IMPLEMENTS!

MAXFIELD, MOTT & Co. *No. 97 North Paca-st. 3 doors south of Franklin*, would call the attention of the Farmers to the Stock which they now have on hand, and to which they are daily making new additions, consisting in part of a LARGE assortment of PLOUGHS, embracing the *Wiley, Miner & Horton, Eagle, Empire, Woodcock, and the Premium Delaware PLOUGH*, together with a very superior Wrought Shear Plough, of their own pattern, which from the beauty and utility of its work has given universal satisfaction—combining, as it does, strength, durability and superiority of form in the mould; they think they may safely say, without the fear of contradiction, that it is the best adapted to general work of any plough now in use. They are also manufacturing Maxfield, Mott & Co's New and Superior SELF-ACTING FAN, which from the manner of its construction, they think themselves fully justifiable in saying that it may be considered the most durable, and at the same time the most rapid chaffing fan now in use. They still continue the only Agents for Healy's Patent Fan, which received the first premium over 24 other Fans at the last Agricultural Fair held in Baltimore in 1848. They have also a variety of the most approved patterns of Threshers and Horse Powers constantly on hand, among which is Edge T. Cope's well known Rail Way Power, which has only to be tried to recommend itself, of which they are the exclusive Agents. They are now manufacturing a great variety of Corn Shellers, Straw and Fodder Cutters, together with every variety of EDGE TOOLS, and keep constantly on hand every thing wanted by the farming interest, which they will dispose of on the most reasonable terms. Being themselves practical workmen in the various parts of the business, they feel confident that they will be able to give satisfaction to all who may favor them with a call.

☞ Implements delivered to every part of the city Free of Charge. oc 1 tf

TO PLANTERS & FARMERS.

KENTISH & CO.'S PREPARED GUANO.

THE subscribers having been appointed Agents for the sale of the above Fertilizer, are ready to receive orders for the same at manufacturers' prices, *one cent per pound*. Terms *cash*—no charge for casks.

Among many certificates, we refer to the following:

"I have used 2 or 3 Tons of your prepared Guano, last year, on corn, oats, potatoes, turnips and wheat—have used every description of manures as well as the imported Guano, and would give yours preference to *all* of them for cheapness, *durability*, convenience; and it increased my crops *double* fold. I would recommend it strongly to all farmers and Gardeners.

23d May, 1849. [Signed] WM. MILLS,
Leach Farm, Jamaica, L. I."

"It renovates the exhausted lands of the South, and on tobacco and corn it is invaluable.

[Signed] KENTISH & CO."

This article contains a portion of *bone dust*, and not a particle of sand, dirt, &c. It can be used at *all* seasons and with *one-third* the labor of any other fertilizer. Its effects are visible many years. It destroys all insects, and for the poorest land requires but 450 pounds per acre. For particulars, see pamphlets at our office. MUNCASTER & DODGE,
oct-3m Georgetown, D. C.

CHICKERING'S PIANOS.

THE subscriber is sole Agent in Baltimore, for the sale of Chickering's celebrated IRON FRAMED GRAND & SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best Instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London. Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possessing eminent talent, skill, untiring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, entrusted to the subscriber, either for Pianos, Music or any article in his line of business, will be faithfully executed. F. D. BENTEEN,
oct-6t 181 Baltimore street.

FOR SALE.—A pair of twin male CALVES, 6 weeks old, out of a very fine half Devon and half Ayrshire Cow, by a full bred Devon Bull. They would probably make a handsome well matched yoke of Oxen. They will be sold low, and if not disposed of before the State Fair, will be exhibited there. Apply at this office. oct1

FOR SALE.—The fine JACK, *Jacob Faithful*, a sure foal getter, imported by Mr. Hamilton, of Talbot Co. He is 13 hands 2½ inches high, about 14 years old—his character can be attested by almost every farmer of Queen Anne's County, where he has been stationed for several years past. Apply to the editor of this paper for further particulars. oct1

FOR SALE.—A fine young BULL, about 18 months old, out of an Ayrshire Cow, by a Durham bull. Apply at this office. oct1

SEED WHEAT.—The subscriber has for sale a few hundred bushels of superior Register Seed Wheat, in the very best order, at $3 per bushel. For description of this Wheat reference is made to the American Farmer for August. Apply to Samuel Sands, Agricultural Rooms, 128 Baltimore-st.
oct1 SAM'L REGISTER.

DUVALL & IGLEHART,
GROCERS AND COMMISSION MERCHANTS,
No. 78 LIGHT STREET WHARF,

Invite the attention of their friends, and the public generally, to their large and general assortment of GROCERIES, embracing every *article* in that line of business, and which they will sell upon pleasing and liberal terms, and at the lowest prices. Any one in want of any article in their line will find it to their advantage to give them a call. *They will also pay particular attention to the sale of all kinds of produce.*
Baltimore, October 1, 1849. 1y

Rushbrook Farm for Sale.

SITUATED Three Miles north-east of Towsontown, Baltimore county, within 10 miles of this city, containing 68 acres, more or less; from 175 to 200 acres in cultivation. It is estimated that there are from 4 to 5000 cords of wood, consisting to a very great extent in chestnut rail timber—all the land in cultivation have been heavily limed, the most of them at 100 bushels per acre. The above farm is newly and thoroughly fenced. The other improvements are, three new and excellent good sized log houses, and one extra size; also one extensive manager's house, having some 8 or 10 rooms; barn (called the three decker) 65 by 45 feet, just new, and having cost $1500, and built in the best manner; corn, hen and other houses; smith shop, and kiln capable of burning 1500 bushels. This farm is undulating; land very kind and susceptible of very high improvement. There is a fine young peach orchard. City property, or stocks will be taken in exchange at a fair valuation. For terms and other particulars, apply to
SAMUEL SANDS,
sep 1 Office American Farmer.

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